Refined Metals Corporation

August 12, 2016

Ms. Ruth Jean
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, IN 46204

Re: Progress Report No. 216 (July 2016)
Refined Metals Corporation (RMC)
3700 South Arlington Avenue; Beech Grove, Indiana

Dear Ms. Jean,

Pursuant to paragraph 64 of the consent decree entered August 31, 1998 and the Final Decision and Response to Comments Document issued by the United States Environmental Protection Agency (EPA) on September 15, 2009, this progress report for activities completed at the subject Site during the month of July 2016 is submitted to IDEM.

1. Actions Taken During July 2016 to Comply with the Consent Decree

   - On July 11, 2016, Advanced GeoServices Corporation (AGC) submitted to IDEM a report titled *"Hazardous Waste Management Unit Closure Report"*.
   - On July 31, 2016, RMC submitted to IDEM the progress report for June 2016.
   - Other actions taken during July 2016 included the following:
     - Efforts continued to secure the final stormwater drainage permit from the City of Indianapolis Department of Code Enforcement (DCE).
     - Preparation of a Corrective Measures Implementation (CMI) Report continued.

2. Results of Sampling and Tests and Other Data Received During July 2016

   - No results of sampling, tests, and other data were received in July 2016.

3. Project Schedule & Percentage of Closure Completed as of July 31, 2016

- Due primarily to volumes of contaminated debris and soil encountered beyond that contemplated in the Final Corrective Measure Design, remediation extended into winter of 2014 – 2015. Rather than work through the winter, work was suspended when the onsite containment cell reached the original design capacity. Geomembrane and 18 inches of cover soil were then placed on the containment cell. Work at the Site was suspended on December 19, 2014. The original intent was to complete the balance of the remediation in the spring of 2015 by treating remaining soil and debris onsite and disposing of it offsite; however, evaluations performed over the winter of 2014 – 2015 indicated this approach would have been cost prohibitive. RMC requested authorization to expand the onsite containment cell so it could accommodate all remaining soil and debris to be excavated. On July 20, 2015, the EPA issued an Explanation of Significant Differences (ESD) authorizing expansion of the onsite containment cell. Remediation work resumed on August 17, 2015. As of the end of 2015, all remediation work had been completed; however, some restoration work remained. By the end of 2015, winter weather (primarily excessively wet conditions) precluded completion of restoration work and work was suspended. Remaining restoration work was completed in the spring of 2016. As of July 31, 2016, approximately 99% of Corrective Measures Implementation had been completed. Only submittal of the CMI Report remains to be completed.

4. Problems or Potential Problems Encountered and Actions Taken to Rectify Problems

- During excavation in the AMT areas, debris and impacted media which appears unrelated to former operations at RMC was observed in some sidewalls. Debris appears to be railroad related (e.g., rails, railroad wheels, railroad ties, cinders, etc.). XRF readings of this material indicate some has elevated metals concentrations. A review of historic aerial photographs indicates the rail line beneath which much of this material is located pre-dates the construction of the RMC facility. Aerial photographs showing this were provided to IDEM and the EPA. Remediation of this debris and impacted media is not contemplated in the Corrective Measures Design. RMC is currently preparing figures that use the historic aerials as the base and on which data collected to date is plotted for IDEM and EPA review.

5. Modifications to Work Plans Proposed to or Approved by IDEM during July 2016

- No modifications to work plans were proposed to, or approved by IDEM in July 2016.

6. Changes in Personnel

- To date, there has been no change in personnel

7. Tasks and Actions Scheduled for August 2016

- Tasks and actions anticipated for August 2016 include the following:

  - Preparation of the CMI Report will continue.
  - AGC will complete plotting of existing data from the AMT areas on historic aerials of the AMT areas and forward these figures to IDEM and EPA.
  - AGC will continue pursuit of the final stormwater drainage permit from the DCE.
  - RMC will draft an Environmental Restrictive Covenant for consideration by IDEM and EPA.

8. Unresolved Delays Encountered

- No unresolved delays were encountered in July 2016.

9. Community Relations

- No community relations activities were performed during the reporting period.

I certify under penalty of perjury that the information contained in or accompanying this progress report is, to the best of my knowledge after thorough investigation, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

REFINED METALS CORPORATION

Matthew A. Love

cc: Tamara Ohl – EPA (via U.S. Mail)
Paul Stratman – AGC (via U.S. Mail)

Refined Metals Corporation

August 12, 2016

Ms. Tamara Ohl
United States Environmental
Protection Agency – Region V
77 W. Jackson Street, LU-9J
Chicago, IL 60604-3590

Re: Progress Report No. 216 (July 2016)
Refined Metals Corporation (RMC)
3700 South Arlington Avenue; Beech Grove, Indiana

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Sincerely,

REFINED METALS CORPORATION

Matthew A. Love

cc: Thomas Linson - IDEM (via Email)
Paul Stratman – AGC (via U.S. Mail)

Extra copy

ADVANCED GeoServices

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HAZARDOUS WASTE MANAGEMENT UNIT
CLOSURE REPORT

Prepared for:
REFINED METALS CORPORATION
Beech Grove, Indiana

HAZARDOUS WASTE MANAGEMENT UNIT CLOSURE REPORT

Prepared for:

REFINED METALS CORPORATION
Beech Grove, Indiana

Prepared by:

ADVANCED GEOSERVICES CORP.
West Chester, Pennsylvania

Project No: 2003-1046-36
July 11, 2016

HAZARDOUS WASTE MANAGEMENT UNIT CLOSURE REPORT

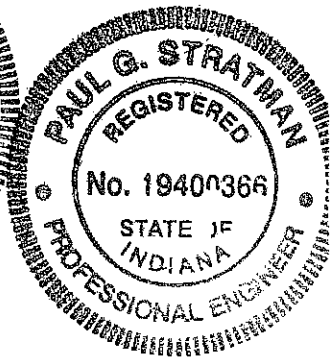
Prepared For:

REFINED METALS CORPORATION
Beech Grove, Indiana

Prepared By:

ADVANCED GEOSERVICES CORP.
West Chester, Pennsylvania

Project No. 2003-1046-36
July 11, 2016



7/11/16

Paul G. Stratman, P.E., P.G.
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LIST OF ACRONYMS

Advanced GeoServices	Advanced GeoServices Corp.
CMD	Corrective Measures Design
CMI	Corrective Measures Implementation
CY	cubic yards
ESD	Explanation of Significant Difference
HWMU	Hazardous Waste Management Unit
IDEM	Indiana Department of Environmental Management
IPL	Indiana Power and Light, Inc.
MS/MSD	matrix spike/matrix spike duplicate
PRG	Primary Remediation Goals
QA	Quality Assurance
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RMC or Refined	Refined Metals Corporation
Site	Refined Metals Corporation facility in Beech Grove, Indiana
USEPA	United States Environmental Protection Agency
XRF	X-Ray Fluorescence

1.0 INTRODUCTION

1.1 PURPOSE

The Refined Metals Corporation (RMC or Refined) facility in Beech Grove, Indiana (the Site) is a former Resource Conservation and Recovery Act (RCRA) Hazardous Interim Status Waste Management facility. The facility is undergoing a Site-wide Corrective Action and closure of the former Interim Status Hazardous Waste Management Units (HWMUs).

This report summarizes the HWMU closure activities completed in 2014 – 2015. The HWMU closure and Site-wide Corrective Action are detailed in the approved Corrective Measures Design (CMD) (latest revision dated May 7, 2014). Implementation of the CMD began in August 2014 with the expectation that work would be completed before the end of the 2014 calendar year; however, an increase in the volume of soil requiring remediation precluded completion during 2014 and required expansion of the onsite containment cell to accommodate the additional soil volume. The CMD was amended in June 2015 for expansion of the containment cell.

On July 20, 2015, the United States Environmental Protection Agency (USEPA) issued an Explanation of Significant Difference (ESD) for the amendments to the CMD that approved expansion of the onsite containment cell southward. The expanded portion of the containment cell, herein referred to as the "Containment Cell B" or CCB, extends over several of the HWMU sub-areas as shown on Drawing 6 of the CMD and Drawing A of this report. The closure of the HWMU was completed in 2015 and this document is being provided to the Indiana Department of Environmental Management (IDEM) to document completion of the HWMU closure.

This HWMU Closure Report documents that the goals and objectives expressed in the CMD have been achieved. This HWMU Closure Report was developed in general accordance with the format requirements outlined in the *RISC Users Guide – Appendix 1* (IDEM, February 15, 2001).

1.2 PROJECT BACKGROUND

The Site is located at 3700 South Arlington Avenue, in Beech Grove, Marion County, Indiana. RMC owned and operated a secondary lead smelter/recycling facility at the Site. A Site location map is provided as Figure 1. The primary contact for the Site is:

Refined Metals Corporation
c/o: Matthew Love
Exide Technologies
Spring Valley Road and Montrose Avenue
Reading, PA 19605
(610) 921-4054

The former facility at the Site processed lead-acid automotive and industrial batteries, and lead-bearing materials for lead recovery. Situated on approximately 24 acres, the facility formerly consisted of a collection of buildings/additions constructed over time, with ancillary structures and mechanical equipment and a lagoon for storm water collection.

All of the structures were decontaminated and demolished to grade between August 2009 and June 2010, except for the storm water pump houses which were decontaminated but remained operational to continue storm water management functions through the start of the Corrective Measures Implementation (CMI). Decontamination and demolition activities were performed in accordance with the *Draft Decontamination and Demolition Plan* (Advanced GeoServices March 4, 2009) and the *Decontamination and Demolition Implementation Plan* (Focus Contracting, June 8, 2009). The pump houses were demolished in 2014 as part of the CMI.

The primary components of the CMD include excavation of impacted soils (lead and other heavy metals) to levels that are below the target closure concentrations ("standards") established for the closure, placement of impacted soils inside a designated onsite containment cell with impermeable cap, and restoration of the Site. The HWMUs represent areas regulated as interim status hazardous waste management units under RCRA by IDEM. The remainder of the Site and offsite areas are regulated by the USEPA.

1.3 HWMU WORK OVERVIEW

The CMI began in August 2014 with the intent of completing work before the onset of winter. During the course of the work, more soils exceeding the applicable standards were encountered than contemplated in the CMD. The original containment cell capacity of approximately 21,490 cubic yards (CY) was reached by December 2014 and HWMU closure was only partially complete. In general, the excavation and closure is considered complete in an HWMU area when all of the bottom samples and sidewall samples are below the PRGs; or when the excavation reaches the lateral limits of the HWMU. Post-excavation analysis was performed using a combination of X-Ray Fluorescence (XRF) field devices and analytical laboratory services. USEPA and IDEM were previously provided with a written summary of the 2014 CMI work and potential approaches to address the remaining work during 2015 (see Advanced GeoServices letter *"Beech Grove Project Update"* dated February 5, 2015). Laboratory Analytical data generated during the 2014 CMI effort was later transmitted to IDEM on April 6, 2015. This report expands upon that submission to include analytical and survey data from the CMI work completed and more explicitly document the final limits of the soil remediation in the HWMU sub-areas.

Historic soil sampling was performed as part of the RCRA Facility Investigation (RFI) that has been previously submitted to IDEM and the USEPA. The Site also has an active groundwater monitoring program. Annual groundwater monitoring reports are submitted to IDEM and USEPA. The history of these analytical programs is not the subject of this document. However, once IDEM approves the closure of the HWMUs the groundwater monitoring program that has been in place since 2007 and focuses on the former Lagoon area will cease and groundwater monitoring will completely transition to the containment cell and Monitored Natural Attenuation monitoring that is described in the CMD.

The sampling discussed herein is the post-excavation confirmatory soil sampling which began in late September 2014 within the designated HWMU excavation areas and continued through late November 2014 before the winter shutdown; as well as sampling performed during the 2015 CMI effort through early November 2015.

2.0 NARRATIVE OF REMEDIATION PROCESS

2.1 CORRECTIVE MEASURES DESIGN

As described above, the CMD included closure of the former Interim Status HWMUs and a Site-wide Corrective Action. The major components for the remedy for the Site as described in the approved CMD are as follows:

- Excavation and onsite consolidation of contaminated soils, from the various excavation areas (onsite and offsite), within an onsite containment cell.
  - Closure of Site HWMUs (Surface Impoundments/Lagoon, Outdoor Waste Piles, and Indoor Waste Piles).
    - There are twenty (20) HWMU sub-areas (including the former Lagoon) that were designated in the CMD for remediation activities in the HWMUs. Of the twenty (20), the CMD required remediation in sixteen (16).
  - Excavation of impacted soils from other onsite areas (non-HWMU areas).
  - Excavation of impacted soils from offsite areas (CSX property, Arlington Avenue right-of-way, and Citizens Gas property).
- Installation of an impermeable cap on the containment cell to prevent the movement of contaminants placed within.
- Installation of monitoring wells around the containment cell to monitor potential migration of contaminants.
- Site restoration to minimize erosion and control storm water leaving the Site.

2.2 2014 CORRECTIVE MEASURES IMPLEMENTATION

Op-Tech Environmental Services, Inc. (Op-Tech) initially mobilized equipment and labor to the site in August 2014 to begin the remedial work associated with the CMI. The first few weeks of the project were spent installing Erosion and Sediment (E&S) control measures and constructing the base and berm for the onsite containment cell. The HWMU excavation anticipated in the CMD is provided on Drawing 6 of the CMD (attached). In general, Op-Tech excavated the HWMU excavation areas from the south to the north; working from the furthest locations from the containment cell to the closest locations. The start of excavation within the HWMU areas began on September 23, 2014. There are a total of sixteen (16) designated HWMU excavation areas (including the lagoon) that were initially identified in the approved CMD. The approved CMD specified initial excavation extents and limits for each of the sub-areas based on historic sample data. Some portions of the HWMU area were not designated for excavation in the CMD, but some soil was ultimately removed from some of those areas based on sidewall sample data and/or the presence of contaminated debris which required removal.

The post-excavation sampling protocols for the HWMU excavation areas identified in the approved CMD were used to determine when an excavation was complete; or when additional removal was needed. Bottom samples were typically collected from the minimum number of locations identified for each sub-area (Sheet 6 of the CMD Drawings). Typically, the sampling was performed using a random spacing of 10 feet grid nodes to encompass the entire bottom of the sub-area, as described in the CMD. In instances where the excavation area for a sub-area increased significantly, additional bottom sample locations were added (see WP1DX and MSB1AX designations).

At each bottom sample location within the HWMU limits, samples were collected from two consecutive intervals (0-6 inches; 6-12 inches) to demonstrate that the target closure concentrations have been met. The target closure concentrations are:

- Lead: 970 mg/kg

- Antimony: 37 mg/kg
- Arsenic: 20 mg/kg
- Cadmium: 77 mg/kg
- Selenium: 53 mg/kg

Additionally, when excavation within adjacent sub-areas resulted in different bottom depths within the HWMU interior, sidewall samples were collected from the face of the excavation defining the change in depth. Examples of this would be an excavation sub-area with a 3 feet bottom depth that is next to an excavation area with a 1 foot bottom depth. No sidewall sampling beyond the horizontal limits of the HWMU area was required. Typically, sidewall samples (where sidewalls existed between adjacent HWMU sub-areas) were collected at a frequency of one per twenty (20) feet of sidewall within the HWMU limits.

Excavated materials from the HWMU excavation areas were placed in the onsite containment cell. Excavation was completed within the majority of the HWMU areas (final bottom and sidewall samples had results below target closure concentrations) during the 2014 Corrective Measures Implementation. However, the containment cell had reached its design capacity in 2014 before all the HWMU sub-areas could be fully excavated. Approximately 21,760 CY of excavated materials from both HWMU and non-HWMU areas was placed in the containment cell in 2014.

2.3 2015 CORRECTIVE MEASURES IMPLEMENTATION

In the spring of 2015, RMC evaluated multiple alternatives for completing the corrective measures and HWMU closure. On June 16, 2015, RMC submitted a *Request for Amendment to Corrective Measures Design* to IDEM and USEPA. The most significant component of the request was the expansion of the onsite containment cell approximately 130 feet to the south. The expanded portion of the containment cell (referred to as the CCB) extends into the footprint of the HWMU excavation areas. USEPA agreed with the concept of the request and issued an ESD on July 20, 2015. As a result, soil remediation from the HWMU excavation areas that fell

within the CCB footprint were initially completed and those excavations were restored using clean fill (imported or generated onsite) to reach the design elevation for the bottom of the containment cell (841.5) to prepare the CCB area.

The approved CCB design provided an estimated capacity for consolidation of up to an additional 15,800 CY of excavated material. Approximately 14,450 CY of contaminated soil and materials were excavated during the 2015 CMI (including soils excavated to complete HWMU excavations). The CCB was constructed in a similar manner as the original containment cell. A soil berm was first constructed around the perimeter of the CCB area to ensure that contaminated soils and liquids did not leave the CCB footprint. Cover soils on the south side of the original containment cell were removed to expose the geosynthetic components of the cap. In the areas where the CCB was tied into the original containment cell, the geosynthetic components were removed, cut/sized, and placed in the flat bottom of the CCB. Soils that still required removal from HWMU excavation areas within the CCB footprint were initially removed and consolidated within the footprint of the existing containment cell on the south slope. Confirmatory sampling was performed to demonstrate that soils remaining within HWMU excavation boundaries were at or below the target closure concentrations, (results for 2014 CMI work and 2015 CMI work performed are attached). Once analytical data demonstrated that the soil removal from the HWMU excavation areas was complete, those excavations were backfilled with clean material (material generated onsite that satisfied the target closure concentrations or imported materials that satisfied the IDEM RISC Residential Default Criteria) to the bottom elevation of the CCB (841.5).

Once excavation was complete within the HWMU excavation areas outside the CCB, they were restored as identified in the CMD and the ESD.

3.0 HWMU CLOSURE STATUS

The HWMU area had pre-defined horizontal limits as depicted on Drawing 6 of the CMD. The HWMU area is shown with darker gray shading on that drawing. The majority of the HWMU areas consisted of pre-defined excavation areas with identifiers based on former operations in that area. Former outdoor waste pile areas carried a "WP" designation. Former materials storage building (indoor waste pile) areas carried an "MSB" designation. The excavation concept for the HWMUs required that the HWMUs be excavated to the pre-defined horizontal limits or until the soils remaining in the un-excavated portions of the HWMU were below the remediation standards as demonstrated by sidewall samples, whichever occurs first. The composite of the overall HWMU excavation is overlaid against the complete HWMU area on Drawing A.

In general, the excavation in the majority of the HWMU excavation areas extended beyond the limits shown on CMD Drawing 6 due to the presence of debris that required removal irrespective of whether or not it was inside or outside of the former HWMU. Excavations within the HWMU were also generally deeper than specified on Drawing 6 of the CMD.

For excavations completed in 2014, the corrected XRF results were used to determine if the target closure concentrations were met. If a corrected XRF result was less than zero, then the uncorrected ("raw") XRF result was used for the parameters with a negative corrected result. For those samples analyzed via both XRF and laboratory analysis, the laboratory result was used to determine compliance with the target closure concentrations. For excavations performed in 2015, the XRF was not used for formal analysis due to jobsite staffing considerations. The Quality Assurance Project Plan (QAPP) in the CMD specifies that post-excavation soil samples in the bottom of HWMU excavation area be collected from the 0-6 inch and 6-12 inch depth intervals at each location.

When reviewing the final sidewall sample designations, please note that an alphanumerical naming system was established as described in Section 5.0. However, in some instances the alphabetical sample identification was established before the excavation was complete. As a result in excavations where a sidewall sample was not collected (due to being outside the HWMU or no final sidewall existed), the alphabetical identifiers for sidewall samples may skip some letters that identify samples that were not necessary.

3.1 HWMU CLOSURE WITHIN CCB FOOTPRINT

All or part of seven (7) of the HWMU excavation areas are located within the limits of the CCB. These areas include: WP1A, WP1B, WP1C, WP1D, WP2A, WP2C, portions of MSB2A, as well as portions of HWMU areas that were not identified for removal in the approved CMD. Excavation within areas WP1B, WP1C, WP1D, and WP2C was completed in 2014. In 2015, excavation was still required to complete closure in areas WP1A, WP2A, and MSB2A. Completing excavation of these areas was a priority at the start of 2015 CMI work.

Figures 2 through 11 depict the post-excavation survey data along with the final post-excavation sample data for each sub-area. Drawing A provides a composite of all of the post-excavation survey data and the final excavation limits for the former HWMUs and Site-wide Corrective Action.

3.1.1 WP1A

Figure 2 is a post-excavation survey of the WP1A/WP1B excavation that also identifies the post-excavation sample locations and results. WP1A is located in the northwest corner of the HWMU area (see Drawings 6 and A). Excavation in the north and west portions of this area began in 2014 but the entire excavation was not completed until 2015 due to the original containment cell reaching the maximum volume. The eastern half was used for access to the original containment cell during its construction.

The CMD proposed that WP1A would have a 2.5 feet excavation depth and a removal volume of 744 CY. The actual depth of excavation required in WP1A typically varied from 2.8 feet to 6.0 feet (4.5 feet average). The additional depth was required based on the observation of battery-related debris or over-excavation where bottom sample results were not less than the target closure concentrations.

The eastern half of the south side of WP1A borders a portion of the HWMU area that was not identified for removal in the CMD. Soil within that area was previously excavated and completely removed as part of debris removal and over-excavation in adjacent sub-areas (work in WP1C). The bottom of the WP1A excavation was similar to over-excavation at WP1C. As a result, there was not a southeastern sidewall remaining from the WP1A excavation. In total, approximately 2,057 CY of soil was removed from WP1A.

3.1.2 WP1B

WP1B is located on the west side of the HWMU area immediately to the south of WP1A (see Drawing A). Figure 2 is a post-excavation survey of the 2014 WP1A/WP1B excavation that also identifies the final post-excavation sample locations and results.

Excavation in this area was completed in 2014. The excavation depth proposed in the CMD was 1.0 feet, which would have resulted in an excavation volume of 85 CY. Soils were initially removed to the design depths. Sampling and XRF screening demonstrated that additional soil needed to be excavated from the south and west sidewalls, as well as, from the bottom of the excavation. Over-excavation was performed at those locations until sample analysis and XRF screening confirmed that this area was below the target closure concentrations. The final depth of the excavation ranged from 2.8 feet to 5.5 feet (as needed to complete removal of debris) and the volume of materials removed from WP1B was approximately 894 CY.

The CMD proposed confirmation samples be collected from three (3) bottom of excavation locations. In 2014, bottom samples were collected from three (3) locations: B1, A2, and A3. The corrected and uncorrected XRF results for the A2 samples were below the target closure concentrations. Subsequently, the lab result for the sample collected in the 0-6 inches bottom interval was received which indicated a lead result of 1,740 mg/kg (sample ID: WP1B/1.0-1.5/A2) which exceeds the target closure concentration of 970 mg/kg. The sample collected at A2 for the 6-12 inches bottom interval had a corrected XRF result of 18.9 mg/kg for lead and all other constituents were also below the target closure concentrations (sample ID: XRF-WP1B/1.5-2.0/A2).

The results at the other sidewall and bottom samples in WP1B demonstrate that soils remaining at those locations are below the target closure concentrations. When averaged together, the three (3) bottom sample results for lead from the 0-6 inch interval of soil remaining in the bottom of the WP1B excavation is 596 mg/kg. When averaged together, the six (6) bottom samples results for lead in the 0-12 inch interval of soil remaining in the bottom of the WP1B excavation is 313 mg/kg. Under both evaluations, the average of soils remaining in the bottom of excavation is well below the target closure concentrations. Despite the fact that the laboratory result for WP1B/1.0-1.5/A2 was above 970 mg/kg, but not re-excavated, the intended remediation of soil in this area is achieved because the average remaining soil concentration across the entire bottom of the excavation in the WP1B excavation area is below the target closure concentrations.

3.1.3 WP1C

WP1C is located on the northern central portion of the HWMU area (see Drawings 6 and A). Figure 3 is a post-excavation survey of the WP1C, WP1D and former battery breaker (WP1DX) excavations that also identifies the "final" post-excavation sample locations and results. The majority of the areas surrounding WP1C were not designated for removal in the CMD (see gray shading outside of excavation on Drawing 6). It shares a small portion of its northern sidewall with WP1B and a small portion of the southern sidewall with WP1D. Excavation in this area was completed in 2014.

The excavation depth proposed in the CMD was 1.3 feet, which would have resulted in an excavation volume of 67 CY. Soils were initially removed to the design depth. Sampling and XRF screening demonstrated that additional soil needed to be excavated across the bottom of the area. Over-excavation was performed until sampling analysis and XRF screening confirmed that soils remaining in this sub-area were below the target closure concentrations. The final depth of the excavation was over 4.0 feet deep and the volume of materials removed from WP1C was approximately 291 CY.

On the western side of WP1C, the excavation bottom is generally the same as what was observed in WP1B and WP1D. As a result, no sidewall samples could be collected. On the northern side of WP1C, the bottom of the excavation was similar to that of the expanded WP1A excavation to the north and no sidewall remained. The WP1D excavation expanded significantly, as required, to remove debris in the former battery breaker area. The depth of excavation within this expanded portion of WP1D was generally the same as the depth of excavation in WP1C so no sidewall remained on the south side of WP1C and no sidewall samples could be collected.

3.1.4 WP1D

WP1D is located on the northwestern portion of the HWMU area (see Drawings 6 and A). Figure 3 is a post-excavation survey of the WP1D/WP1DX excavation (WP1C is also included on this figure) that also identifies the "final" post-excavation sample locations and results.

The western end of WP1C is immediately north of WP1D. The western border of WP1D is shared with a portion of the HWMU area that was not designated for excavation. The eastern border of WP1D is shared with the former battery breaker area that is not part of the HWMU area. The southern border of WP1D is shared with the FL2 excavation area that is also not a part of the HWMU area. Excavation in WP1D was completed in 2014.

The excavation depth specified for WP1D by the CMD was 3.3 feet, which would have resulted in an excavation volume of 44 CY. Soils were initially removed to the design depth. Sampling and XRF screening demonstrated that this area satisfied the target closure concentrations. The final excavation depth increased to as much as 7.0 feet in some locations (5.1 feet average) as a result of continued debris removal in the former battery breaker area located to the east. The combined soil volume removed from WP1D and the former battery breaker area (WP1DX) was approximately 1,902 CY.

Sidewall samples used to demonstrate remediation on the east side of the WP1D excavation were replaced by sidewall samples collected during the expansion of the WP1DX excavation. Excavation of WP1D is considered complete.

3.1.4.1 **Battery Breaker Area (WP1DX)**

The former Battery Breaker Area lies immediately to the east of WP1D and represents an expansion of the WP1D excavation (see location on Drawings 6 and A). Figure 3 is a post-excavation survey of the WP1D/WP1DX excavation (WP1C is also included on this figure) that also identifies the "final" post-excavation sample locations and results. During the excavation at the eastern sidewall of WP1D, extensive debris was encountered some of which consisted of a series of concrete walls and bins below grade containing impacted soils and battery fragments. Due to the extent of additional excavation beyond the eastern sidewall, this excavation area was designated WP1DX and was tracked separately from the remainder of the WP1D excavation.

Initially, soils removal was largely based on the presence of debris. Soils were excavated until free of discoloration and debris. Separate bottom and sidewall samples were collected from within this excavation area. The bottom of this area was excavated approximately 3-4 feet deeper than proposed for the WP1D excavation (total depths of over 7.0 feet). As a result of sidewall collapse and excavation access, the WP1D excavation ultimately extended across the area that became denoted by the WP1DX designation. Confirmatory sampling and XRF analysis

confirm that the soils exceeding the target closure concentrations had been successfully removed from this area.

Please note that the eastern limits of this excavation and associated sidewall soils were eventually removed as a result of over-excavation in the adjacent WP2C and MSB2A excavations.

3.1.5 WP2A

WP2A is located in the north-central portion of the HWMU area (see Drawings 6 and A). Figure 4 is a post-excavation survey of the 2014 WP2A/WP2B excavation that also identifies the WP2A post-excavation sample locations and results. The north side of WP2A represents the northern limit of the HWMU area. WP2A is bordered to the east by excavation area WP2B; to the west by WP1A; and to the south by WP2C and portion of the HWMU area that is not specified for remediation in the CMD.

Excavation in this area began in 2014 but was not completed in 2014 due to the containment cell capacity reaching the maximum volume. WP2A was proposed to have a 7.3 feet excavation depth in the CMD, and a removal volume of 1,137 CY. The actual depth of excavation required in WP2A was approximately 7.3 feet. 1,211 CY of material was removed from the WP2A sub-area in 2014.

Although the majority of the excavation occurred in 2014, limited additional excavation of debris and waste materials associated with the sidewall F location was completed in 2015. Additional soil removal within the western portion of WP2A occurred as a result of over-excavation in the adjacent WP1A area. The results of post-excavation sampling demonstrate that the soils remaining in WP2A are below the target closure concentrations and excavation is complete.

3.1.6 WP2C

WP2C is located in the north-central portion of the HWMU area (see Drawings 6 and A). Figure 5 is a post-excavation survey of the WP2C excavation. The north side of WP2C is bordered to the north by WP2A and to the south by MSB2A. On the east and west sides of WP2C lie portions of the HWMU area that are not designated for excavation in the CMD. Excavation in this area began in 2014 but was not completed due to the original containment cell reaching the maximum volume. WP2C was proposed to have a 1 foot excavation depth in the CMD and a removal volume of 103 CY. The average depth of excavation required in WP2C was approximately 3.7 feet. 657 CY of material was removed from the WP2C excavation in 2014. Minimal additional excavation of waste materials was performed in 2015 to complete the closure of the WP2C area. The results of post-excavation sampling demonstrate that the soils remaining in WP2C are below the target closure concentrations and excavation is complete.

3.1.7 MSB2A

MSB2A is located in the central-eastern portion of the HWMU area (see Drawings 6 and A). Figure 6 is a post-excavation survey of the MSB2A excavation that also identifies the final post-excavation sample locations and results. The western portion of the north border is bounded by WP2C. The eastern portion of the northern border is bounded by a portion of the HWMU area that did not have excavation proposed in the CMD. The east and west sides of MSB2A are bordered by portions of the HWMU area that did not have excavation proposed in the CMD. MSB1A lies to the south of MSB2A. The MSB2B excavation area lies within the boundary of MSB2A. Only the northeastern corner of MSB2A will lies within the CCB footprint. Excavation in this area was completed in 2014.

MSB2A was proposed to have a 1.0 feet excavation depth in the CMD and a removal volume of 449 CY. The average depth of excavation required in MSB2A was approximately 3.3 feet. Excavation at portions of the north, east, and west sidewalls progressed into portions of the

HMWU area where excavation was not proposed in the CMD. 2,016 CY of material was removed from the MSB2A excavation in 2014

The excavation of the eastern sidewall of MSB2A progressed beyond the original limits and into a portion of the HWMU area that was not designated for excavation in the CMD. The results of post-excavation sampling demonstrate that the soils remaining in MSB2A are below the target closure concentrations and excavation is complete.

3.2 HWMU CLOSURE OUTSIDE OF CCB

Nine (9) of the HWMU excavation areas lie completely beyond the proposed limits of the CCB expansion. These areas include: WP2B, WP3A, WP3B, WP6A, WP6B, MSB1A, MSB1B, MSB2B, and the Lagoon, as well as portions of the HWMU area that were not originally identified for removal in the approved CMD.

3.2.1 WP2B

WP2B is located on the northeast corner of the HWMU area immediately east of WP2A and an area north of MSB2A that was not specified for excavation in the CMD (see Drawings 6 and A). Figure 4 is a post-excavation survey of the WP2B excavation showing post-excavation sample locations and results.

Excavation in this area began in 2014 but was not completed due to the original containment cell reaching its maximum capacity. The excavation depth proposed in the CMD was 2.5 feet, which would have resulted in an excavation volume of 494 CY. The actual depth of excavation required in WP2B varied from 2.6 feet to 7.5 feet (5.1 feet average). During excavation in the east end of this excavation area, railroad tracks were encountered extending from the exposed railroad spur to the north. The materials encountered beneath the tracks consisted of a discolored (black) soil with a portion of battery debris co-mingled with railroad stone ballast.

Materials comingled with the railroad track ballast that extended past the former pump house #3 location to the south were also excavated. The eastern and southern sidewall samples in WP2B initially demonstrated that the target closure concentrations had not been achieved and additional soil was removed from these areas. Debris removal also proceeded north and east beyond the limits of the HWMU area. Approximately 1,463 CY of material was removed from the WP2B excavation area in 2014 before work ceased. The target closure concentrations had been satisfied at all five (5) bottom sample locations.

At the conclusion of work in 2014, plastic sheeting was placed to cover soils and visible debris that remained on the eastern sidewall, as well as, over a portion of the southern sidewall that did not satisfy target closure concentrations so that the remainder of the area could be backfilled to allow for positive drainage towards the north during the winter of 2014 to 2015.

Additional excavation was performed in 2015 to remove impacted materials on the south sidewall represented by sidewall sample B. The southern sidewall of the WP2B excavation extended further south and eventually joined with the north side of the MSB2A excavation.

The sidewalls which still required excavation and/or sampling were covered in poly sheeting at the end of 2014 work. This protected clean fill soil that was placed in the adjacent excavation and served as a visual delineator for additional excavation that was required. The sidewalls beyond the poly sheeting were over-excavated in 2015 to remove debris and soil to the limits of the HWMU area. No additional sidewall samples were collected from locations D and E in the north sidewall and location A on the east sidewall because the 2015 excavation expanded beyond the limits of the HWMU area.

The results of post-excavation sampling demonstrate that the soils remaining in WP2B are below the target closure concentrations and excavation is complete.

3.2.2 WP3A

WP3A is located directly south of WP1DX (Battery Breaker Area) and north of WP3B (see Drawings 6 and A). Figure 7 is a post-excavation survey of the WP3A excavation that also identifies the post-excavation sample locations and results. Excavation in this area was concurrent with the excavation in area WP3B to the south. Soils in the WP3A excavation were initially removed to the design depths. Several of the bottom and sidewall samples in this area exceeded the target closure concentrations based on XRF and laboratory analysis. Multiple over-excavations in this area were performed until sample results confirmed that all soils exceeding the target closure concentrations were removed. The excavation depth proposed in the CMD was 1.3 feet which would have resulted in an excavation volume of 50 CY. The actual depth of the excavation in WP3A varied from 2.0 feet to 3.7 feet (2.9 feet average). Approximately 282 CY of materials were removed from the WP3A excavation area. The northern side borders excavation area WP1DX.

A power pole with transformers was located at the north end of excavation area WP3A. Indiana Power and Light, Inc. (IPL) removed the electrical service on the west end of the property including the pole located in excavation area WP3A. Then the disconnected poles were removed and the small volume of impacted soils, approximately 172 CY, remaining around the poles in this area was excavated. The results of post-excavation sampling demonstrate that the soils remaining in WP3A are below the target closure concentrations and excavation is complete.

3.2.3 WP3B

Excavation in this area was concurrent with the excavation in area WP3A to the north. Figure 7 is a post-excavation survey of the WP3B excavation that also identifies the post-excavation sample locations and results.

Soils in WP3B were initially removed to the design depths. Several of the bottom and sidewall samples in this area initially were not below the target closure concentrations based on XRF and laboratory analysis. Several over-excavations in this area were performed until sample results confirmed that all soils exceeding target closure concentrations were removed. The excavated depth specified in the CMD was 3.3 feet which would have resulted in an excavation volume of 123 CY. The final excavation depth increased to as much as 4.4 feet in some locations (3.9 feet average) as a result of continued debris removal to the east. The final soil volume removed from WP3B was approximately 230 CY.

The CMD proposed that four (4) sidewall samples would be required in the WP3B excavation. Four (4) sidewall samples were initially collected. After multiple rounds of over-excavation at the A, B, and C locations, sidewall samples were collected which satisfied the target closure concentrations. Soils represented by sidewall sample location D were eventually removed during excavation along the western end of the debris trench excavation that was associated with non-HWMU excavation area FL-2.

The results of post-excavation sampling demonstrate that the soils remaining in WP3B are below the target closure concentrations and excavation is complete.

3.2.4 WP6A

WP6A is located in the southern central portion of the Site (see Drawings 6 and A). Figure 8 is a post-excavation survey of the WP6A excavation that also identifies the post-excavation sample locations and results. Excavation in this area began on the east end and proceeded towards the west. Initial excavation depths in the southern portion of this area were to the design depths (1.0 feet). As the excavation turned towards the north, debris was encountered along the east sidewall. The excavation along the eastern sidewall was extended down to as deep as 6.5 feet BGS to remove the debris observed. The remainder of the north end of excavation area WP6A was excavated to the depth of 2.0 feet or greater (design depth of 1.0 feet specified in the CMD).

The CMD proposed that WP6A would have a 1.0 feet excavation depth and removal volume of 663 CY. The actual depth of excavation required in WP6A varied between 1.0 feet to 6.9 feet (4.0 feet average) as a result of debris encountered on the east sidewall of the excavation area. The final soil volume removed from WP6A was approximately 1,299 CY.

No sidewall samples were required to be collected by the CMD. The results of post-excavation sampling demonstrate that the soils remaining in WP6A are below the target closure concentrations and excavation is complete.

3.2.5 WP6B

WP6B is located south of WP6A (see Drawings 6 and A). Figure 8 is a post-excavation survey of the WP6B excavation that also identifies the post-excavation sample locations and results. Excavation in this area was originally to the design depths. XRF and lab sample results that exceeded the target closure concentrations required the southern tip of this excavation area to be re-excavated. Once XRF screening and laboratory data indicated that the levels of the Site contaminants were below the target closure concentrations, this area was backfilled.

The CMD proposed that WP6B would have a 1.3 feet excavation depth and removal volume of 17 CY. The actual depth of the excavation required in WP6B varied between 1.4 feet to 1.9 feet (1.7 feet average). The final soil volume removed from WP6B was approximately 37 CY. The results of post-excavation sampling demonstrate that the soils remaining in WP6A are below the target closure concentrations and excavation is complete.

3.2.6 MSB1A

MSB1A is located on the central to east side of the main HWMU area (see Drawings 6 and A). Figure 9 is a post-excavation survey of the MSB1A excavation that also identifies the post-excavation sample locations and results.

Excavation in this area began at the south end and progressed to the north. In general, the soils in this area did not contain debris except for the sidewalls to the east and west and an area at the north end of MSB1A containing an old pit filled with battery remnants, construction debris and stained soils. Approximately twelve (12) feet of soil and debris was removed from this former pit area until a visually clean bottom and sidewalls were observed. After the initial excavation was completed, XRF and laboratory analysis of samples collected from the sidewalls of bottom locations indicated that several locations exceeded the target closure concentrations. These areas were over-excavated and re-sampled until post-excavation results were below the target closure concentrations. Additional excavation to remove soil at sidewall sample locations D and E was performed in 2015.

The CMD proposed that MSB1A would have a 1.0 feet excavation depth and removal volume of 516 CY. The actual depth of the excavation required in MSB1A typically varied between 1.6 feet and 3.5 feet (2.6 feet average, excluding the former pit). The final soil volume removed from MSB1A was approximately 2,114 CY. The results of post-excavation sampling demonstrate that the soils remaining in MSB1A are below the target closure concentrations and excavation is complete.

3.2.6.1 **Former Furnace Room (MSB1AX)**

As excavation proceeded on the south side of the MSB1A excavation area, it was apparent that there was a significant amount of debris that extended into the area of the former furnace room located immediately south of the MSB1A area. For purposes of sample tracking, this area was designated as MSB1AX. Figure 10 presents the survey drawing of the MSB1AX excavation including sample locations and results.

The material removed consisted of a slab of concrete overlaying discolored soils and slag. A large portion of MSB1AX is not part of the HWMU area although the east and west sides of this area abut portions of the HWMU area that were not specified for excavation in the CMD. The south sidewall lies outside the limits of the HWMU.

This excavation began in 2014 but was not completed due to the fact that the containment cell reached its maximum capacity. Poly sheeting was placed on the western sidewall to act as a barrier between the clean backfill placed and the impacted soil that had yet to be removed at the sidewall sample I location. The final limits of the excavation were outside of the HWMU area and a large concrete footing was beneath the grade in the area of sidewall sample I. The concrete footing measured approximately 30 feet by 30 feet and was approximately 4 feet thick. During the weekly construction progress conference call with IDEM and USEPA on October 28, 2015, Advanced GeoServices described the significant level of effort that was used in an attempt to demolish the large concrete structure with little to no success. During the call, it was also discussed that a soil sample was collected and analyzed at the north end of excavation area WP6A which was below the target closure concentrations approximately 20 feet south of the footing. During the call, RMC requested that the concrete footing be permitted to remain and the excavation beyond the HWMU limits be considered complete. IDEM and USEPA verbally agreed that this would be acceptable.

Approximately 659 CY were excavated from area MSB1AX.

3.2.7 MSB1B

MSB1B is an excavation area targeted for deeper excavation located within the footprint of the MSB1A excavation area (see Drawings 6 and A). Figure 9 is a post-excavation survey of the MSB1B excavation that also identifies the post-excavation sample locations and results. Excavation was completed in this area once the surrounding excavation (MSB1A) was taken down to design grade. The soils in this excavation area were removed to the design grade.

The CMD proposed that MSB1B would have a 2.5 feet excavation depth and removal volume of 66 CY. The actual depth of the excavation required in MSB1B typically averaged 3.5 feet. The final soil volume removed from MSB1B was approximately 116 CY. The results of post-excavation sampling demonstrate that the soils remaining in MSB1B are below the target closure concentrations and excavation is complete.

3.2.8 MSB2B

MSB2B is an excavation area targeted for deeper excavation located within the footprint of the MSB2A excavation area (see Drawings 6 and A). Excavation was completed in this area once the surrounding excavation (MSB2A) was taken down to design grade. Figure 6 is a post-excavation survey of the MSB2B excavation that also identifies the post-excavation sample locations and results. The soils in this excavation area were removed to the design grade. One of the initial sidewall sample locations (Sidewall F) in this area did not meet the target closure concentrations. Additional excavation to remove soil on the eastern sidewall was performed and the confirmation sidewall sample F2 was less than the target closure concentrations.

The CMD proposed that MSB2B would have a 6.0 feet excavation depth and removal volume of 369 CY. The actual depth of the excavation varied between 6.2 feet to 6.5 feet (6.4 feet average). The final soil volume removed from MSB2B was 547 CY (including additional excavation on southeast sidewall). The results of post-excavation sampling demonstrate that the soils remaining in MSB2B are below the target closure concentrations and excavation is complete.

3.3 LAGOON CLOSURE

The former Lagoon is located on the eastern edge of the former facility portion of the property (see Drawing 6). Figure 11 is a post-excavation survey of the 2014 Lagoon excavation that also identifies the post-excavation sample locations and final results. The Lagoon was partially full with water at the start of the CMI work in 2014 and the water volume varied during work based on the volume of storm water generated onsite by various storm events. Water from the Lagoon was pumped through an onsite filtration system and discharged to the local POTW under a permit obtained by the Contractor.

Excavation of the Lagoon area began once the area was dewatered. First, the cattails and sediment were placed in the containment cell. Then the bottom liner layer was removed and placed in the containment cell. After removal of those materials, the concrete liner was broken into smaller pieces, removed and stockpiled for sampling. Excavation of soils from the bottom of the Lagoon began on the south end and progressed to the north end. A temporary sump was constructed in the south end of the Lagoon bottom to collect and pump remaining water into a frack tank for storage and treatment. Excavated bottom soils were placed in the containment cell. Then excavation of sidewalls of the Lagoon began.

The CMD proposed that the Lagoon would have a 1.0 feet excavation depth and removal volume of 343 CY from an area of just over 1,000 SY. Including the side slopes of the Lagoon, the actual area was over 2,400 SY and the actual depth of the excavation was over 1.5 feet. The final soil volume removed from the Lagoon area was 1,243 CY.

Confirmatory sampling was performed in accordance with the CMD. Following the initial excavation and sampling, all but one sample location was below the target closure concentrations (Sidewall R). Additional lateral excavation was performed at the Sidewall R location and the resulting sidewall sample R1 was below the target cleanup concentrations. The results of post-excavation sampling demonstrate that the soils remaining in the Lagoon are below the target closure concentrations and excavation is complete.

4.0 RESTORATION AND 2015 CMI

4.1 2014 RESTORATION

In general, the progress of onsite excavations (including the HWMU excavations) were reviewed during weekly progress meetings and informal approval was provided by IDEM to indicate that excavation was completed on an excavation area by excavation area basis based on sample and survey data. Completed excavation areas were then restored using compacted soil fill. Granular fill was placed in a 6-inch thick surface layer over portions of the Site, as specified in the CMD. Temporary seed and mulch were placed on the disturbed excavation areas where no granular fill was specified. Seed and mulch were also placed on the containment cell to protect the structural fill soils from erosion.

The Site storm water system and basins were not constructed in 2014. Excavation was incomplete in several of the HWMU excavation areas at the end of the 2014 CMI work. These areas were covered with plastic sheeting and surveyed to document the locations. The excavations were then backfilled with imported fill materials to create positive drainage onsite during the demobilization period.

4.2 2015 RESTORATION

On November 9, 2015, the slopes of the containment cell constructed in 2014 were hydroseeded by Myers Sod. The following day, Erosion Control Mat was installed on those slopes of the containment cell. On the CCB, the cap cover soil, consisting of dense clay, was placed above the geosynthetics on the CCB up to the tie-in location between the portion of the containment cell built in 2014 and the CCB.

The storm water systems construction began in late 2015 but was suspended due to wet conditions in November and December 2015. Topsoil could not be placed on the CCB portion of the containment cell in December of 2015 due to the wet soil conditions both onsite and at offsite borrow sources.

Storm water work construction and the remainder of the restoration work was performed in April 2016 and early May 2016. This included:

- Grading and fill placement to create the storm water basins;
- Installation of piping for swale under drains and to convey water between basins; Creation of the pocket wetland slopes;
- Placement of granular fill to restore Basin 1 and surrounding areas;
- Placement of topsoil and seeding on the CCB and designated surrounding areas; and,
- Placement of erosion control mat on the CCB.

Due to wet conditions, placement of topsoil and restoration of the pocket wetlands (including wetland plantings) was delayed until the end of May 2016.

4.3 OPERATION AND MAINTENANCE DURING CMI

The only O&M issues in 2014 were related to E&S structures and the upkeep of the Site security fencing during the shutdown period. The remediation activities onsite were inactive between December 2014 to August 2015 due to poor weather over the winter months, scheduling conflicts in the spring of 2015, and the request/approval process to expand the onsite containment cell. During the shutdown period, the Site was regularly inspected and any concerns or items that needed repair were reported.

On June 11, 2015 structural fill and seed, mulch, and topsoil were placed on the slopes of the containment cell to repair erosion damage that occurred during the 2014-215 winter shutdown.

On August 6, 2015 personnel from IPL disconnected power from four (4) poles located within onsite excavation areas and/or the CCB footprint. The poles and underlying soils were subsequently removed.

5.0 POST-EXCAVATION CONFIRMATION SAMPLING

5.1 FIELD XRF SCREENING

During excavation of HWMU excavation areas a portable handheld XRF device was utilized to aid in real-time vertical and horizontal delineation of soil exceeding target closure concentrations. This field screening consisted of placing the XRF on a plastic sheet above the soil and was used to assess when excavation was complete and confirmatory sampling was appropriate.

5.2 SOIL SAMPLE COLLECTION

Once field screening indicated that remaining soil was below target closure concentrations, confirmatory samples were collected from within the HWMU excavation area. Bottom samples were collected from the 0-6 inches and 6-12 inches depth increments inside HWMU excavations. In general, the bottom sampling frequency was as described in Section 2.3 of the CMD and indicated on Drawing 6 of the CMD.

When conditions allowed, sidewall samples were collected from internal HWMU sidewalls at a frequency of approximately on per 20.0 feet as described in Section 2.3 of the CMD. Sidewall samples were not required on sidewalls that were beyond the pre-defined HWMU limits. Drawing 6 of the CMD identified the anticipated quantity of sidewall samples for each HWMU excavation area. In many cases, the actual number of final sidewall samples that were collected is less than indicated on Drawing 6. This was because, in many instances, the bottom depth of adjacent excavations was similar and resulted in no sidewall remaining to be sampled. In other instances the horizontal extent of the excavation extended beyond the pre-defined HWMU limit and, as a result, sidewall sampling was not performed.

Soil samples were placed in sealed plastic bags, homogenized for no less than one minute. Samples were placed on ice and transported in laboratory coolers and stored inside of the onsite trailer for XRF analysis and/or laboratory analysis of confirmation samples

For the majority of soil sample collection standard lab containers and equipment were used. This included:

- Appropriate PPE (i.e. gloves, Tyvek suit, hard hat, respirator, safety glasses and boots, etc.);
- A disposable, plastic trowel to dig into soil to collect samples from 0-1 foot below the bottom of the excavation surface;
- New, clean disposable plastic baggies (gallon size); and,
- 120 mL/4-oz. pre-cleaned clear glass jars.

5.2.1 Equipment Decontamination

Soil samples were collected by hand using disposable trowels, clean nitrile gloves, and new plastic bags or laboratory supplied containers for each sample. Since disposable trowels and new laboratory supplied containers were used, no equipment decontamination was necessary.

5.3 SAMPLE QUALITY CONTROL

Duplicate samples, equipment blanks and matrix spike/matrix spike duplicate (MS/MSD) samples were collected at a rate of one sample per twenty (20) samples sent for lab analysis.

Soil sample duplicates were collected and homogenized before being split. Field duplicate samples provided precision information of homogeneity, handling, shipping, storage, preparation and analysis. The duplicate QC samples were labeled with distinct identification location and times, and submitted to the laboratory as regular samples. The actual identification of the

duplicate QC samples was recorded in the log book and on the Advanced GeoServices' copy of the Chain-of-Custody.

Matrix spike samples/matrix spike duplicate samples were collected and analyzed for the same parameters as the parent sample. To ensure sufficient sample volume, MS/MSD sample locations had additional soil volume collected from the same diameter and depth interval as the parent sample immediately adjacent to the parent sample location. Both soil volumes were composited together and analyzed with the XRF before being placed in the laboratory supplied sample jars. Each sample was labeled with the sample number as the parent sample, designated as an MS/MSD sample, and submitted to the laboratory for the appropriate analyses. MS and MSD samples determine accuracy by the recovery rates of the compounds added by the laboratory (the MS/MSD compounds are defined in the analytical methods). The MS samples also monitored any possible matrix effects specific to samples collected from the Site and the extraction/digestion efficiency. In addition, the analysis of MS/MSD samples checked precision by comparison of the two spike recoveries. One MS/MSD sample was collected for every twenty (20) investigative and duplicate soil samples collected and sent to the offsite lab for analysis.

5.4 SAMPLE HANDLING

When sampling was performed, a Chain-of-Custody form was completed identifying the sample date, sample time, sample name, sample location, and analyses requested.

5.4.1 Field Sampling Documentation Procedures

Field sampling operations and procedures were documented by Site personnel in waterproof hard-bound field logbooks. Documentation of sampling operations included the following:

- Sample identification

- Location collected
- Time and date collected

5.4.2 Sample Custody

Sample identification and Chain-of-Custody documentation was maintained throughout the project using the following procedures:

- Sample labels were placed on each sample container to prevent misidentification of samples.
- Field logbooks were maintained to record information about the sample collection procedure.
- Chain-of-Custody records were created to establish the documentation necessary to track sample possession from the time of collection to laboratory analysis.
- Laboratory logbooks and analysis notebooks were maintained at the laboratory to records all pertinent information about the sample.

Chain-of-Custody requirements complied with standard operating procedures indicated in the IDEM and USEPA sample handling protocols. The Chain-of-Custody indicated any special preservation required which typically was limited to placing ice on the sample containers in a cooler. A temperature blank was also placed in the cooler with the samples to ensure that the proper temperature was maintained upon delivery to the laboratory. The Quality Assurance (QA) representative that collected the samples transferred the samples to the subcontracting laboratory courier who picked samples up directly from the Site. The party relinquishing the samples and receiving the samples would execute the Chain-of-Custody by signing, dating and noting the time on the document. An original copy accompanied the shipment of the samples and copies were kept by the QA representative for record keeping.

5.4.3 Sample Designation

Samples collected from each location were identified by using a standard label which was attached to the sample container. The following information was included on each sample label:

- Site name;
- Sample name;
- Date and time of sample collections;
- Designation of the sample (i.e., grab or composite);
- Type of sample with brief description of sampling location (depth);
- Initials of sampler;
- Sample preservative used (if necessary); and,
- General types of analyses to be conducted.

5.4.3.1 **Sample Identification System**

The following sample identification system was utilized to identify the location, type and depth of each soil sample collected during the CMI. The excavation area identification matched the designations shown on the design drawings and the sample location utilized an alpha-numeric designation developed by the Advanced GeoServices Representative in consultation with the Remediation Contractor. Additional information included depth of sample relative to pre-remediation ground surface.

Type of Sample	Excavation ID/Depth (in feet)/Location
XRF Bottom Confirmation (WP1A excavation area; 0-6 inches below excavation; A1 location with 1 foot initial excavation depth)	XRF-WP1B/1.0-1.5/A1
XRF Bottom Confirmation (WP1A excavation area; 6-12 inches below excavation; A1 location)	XRF-WP1B/1.5-2.0/A1
XRF Bottom Confirmation (WP1A excavation area; 0-6 inches below excavation; A2 location with 1 foot initial excavation depth)	XRF-WP1B/1.0-1.5/A2
XRF Bottom Confirmation (WP1A excavation area; 6-12 inches below excavation; A2 location)	XRF-WP1B/1.5-2.0/A2
Lab Analysis Confirmation	WP1B/1.0-1.5/A1
Duplicate	WP1B-D/1.0-1.5/A1
2nd Deeper resamples following (re-excavation to 2 feet depth)	WP1B/2.0-2.5/B1
	WP1B/2.5-3.0/B1
3rd Deeper resample	WP1B/3.0-3.5/C1

Note: Depth interval listed in sample identifier is based on depth from bottom of original excavation.

Type of Sample	Excavation ID/Location
XRF Sidewall Confirmation	XRF-WP6A/sidewall-A
Lab Analysis Confirmation	WP6A/Sidewall-A
2nd Resample	WP6A/Sidewall-A2
3rd Resample	WP6A/Sidewall-A3

Note: In many cases the quantity and identification of sidewall samples was originally laid out based on the quantity anticipated on Drawing 6 of the CMD and a frequency of 1 per 20 feet of sidewall. However, as described previously in Section 5.2, the final excavation conditions often resulted in a final sidewall alignment that was shorter than anticipated on Drawing 6, or was outside of the pre-defined HWMU limits. In these instances when an alphabetical identification

was assigned, but not used, the sample identifiers within an excavation area will not utilize consecutive letter designations.

5.5 SOIL SAMPLE ANALYSIS

The target closure concentrations for the Site contaminants that were analyzed and evaluated in soil samples collected within HWMU excavation areas are:

- Antimony: 37 mg/kg;
- Arsenic: 20 mg/kg;
- Cadmium: 77 mg/kg;
- Lead: 970 mg/kg; and,
- Selenium: 53 mg/kg.

During the 2014 CMI work, soil analysis was typically performed using an XRF. The XRF analysis was performed in a manner based on USEPA SW-846, Method 6200 and described in Section 2.3 of the CMD. A minimum of five (5) readings was taken for each sample. The readings were recorded in a field book and the results were averaged to provide an uncorrected concentration.

The XRF unit was calibrated each morning using the reference standards provided by Pine Environmental. Calibration was typically performed prior to the first use of the XRF each day and in the afternoon. For the majority of the XRF analysis, a Thermo Niton XL2 980 GOLD unit was utilized. However, an Olympus Alpha 2000 unit was substituted over a period of approximately two (2) weeks (starting on October 11, 2014) while the Niton unit was sent for servicing. The Olympus unit was observed to produce similar results to the Niton unit when re-analyzing samples and standards.

Approximately 22.5% of the HWMU post-excavation soil samples collected in 2014 (92 out of 409) were sent to Pace Analytical (Pace) Indianapolis laboratory for total metals analysis using methods USEPA SW-846, Method 6010/ASTMD 2794-87. Initially, the samples that were sent to Pace which spanned a range of metals concentrations based on XRF analysis. This was done to establish a correlation between laboratory and XRF data and was then used to establish the correction factors for XRF data (as discussed in Section 5.1). The correction factor was developed by Advanced GeoServices and submitted to IDEM and USEPA for approval in a memo dated November 3, 2014. The use of the proposed correction factors was approved by IDEM and USEPA in an email received on November 7, 2014. Correspondence pertaining to the acceptance of the XRF correction factor is provided in Attachment A.

As work progressed in 2014, samples were submitted for laboratory analysis when XRF analysis produced a result that was close to the target closure concentrations. Lab data is given precedence over XRF results when results differ.

During the 2014 CMI work, the time required to analyze and record data for an XRF sample was observed to approach 30 minutes per sample. Due to considerations on the best use of time by onsite personnel and overall project cost, during the 2015 CMI work, the XRF was primarily used as a real-time screening tool and was not relied upon for post-excavation confirmation samples. Post-excavation confirmation soil sample analysis was performed by Pace. An additional thirty-six (36) post-excavation samples from HWMU excavation areas were analyzed by Pace in 2015.

A summary of data generated by laboratory analysis of HWMU excavation samples is provided as Table 1. Raw (uncorrected) XRF data from the 2014 HWMU post-excavation samples is provided as Table 2. Corrected XRF data from 2014 HWMU post-excavation samples is provided as Table 3. Figures showing the post-excavation conditions for each HWMU sub-area including a summary table of the final post-excavation bottom and/or sidewall sample results is included in the figures section. Laboratory reports are included in this submission electronically

as Attachment B (please note the laboratory data reports for the 2014 sampling were previously provided to IDEM, but is provided again in Attachment B).

5.6 DATA VALIDATION PROTOCOL

Validation of analytical soil data as received from the laboratory was performed by Advanced GeoServices QA Scientists. Validation was performed in general accordance with the following data validation guidance documents, where applicable:

- National Functional Guidelines for Inorganic Data Review, Multi-Media, Multi-Concentration. USEPA, February 1994.
- Region V Standard Operating Procedures for Validation of CLP Inorganic Data, USEPA, September 1993.

Specifically, the information examined consisted of sample results, analytical holding times, sample preservation, Chains-of-Custody, initial and continuing calibrations, field and laboratory blank analysis results, instrument performance check sample results, MS/MSD recoveries and RPD and field duplicate recoveries. If the criteria listed in the analytical method were not met for any parameters, the associated samples were flagged as described in the referenced validation guidelines. During data validation, data was also reviewed for transcription, calculation, and reporting errors. Calculations for obtaining concentration data for all parameters may be found in the referenced methods.

The purpose of data validation was to verify and retrace the path of the sample from the time of receipt for analysis to the time the final data package report was generated. Upon completion of data validation, the results were reported in tabular form (Table 1) with data validation flags applied as appropriate to determine the usefulness of the data. The data validation flags were consistent with the USEPA data validation guidelines. A data validation report was written and distributed to assist in making decisions based on the analytical results.

5.6.1 Data Evaluation

The laboratory analytical data was validated and/or qualified according to guidance provided in CQAP provided in the CMD.

Advanced GeoServices QA duties were to:

1) Perform audits to confirm that regular calibration of testing equipment was properly conducted and recorded;
2) Perform audits to confirm that the testing equipment, personnel and procedures did not deviate from their standards or ensuring that any changes did not adversely impact the value of the test data used to determine compliance with the CMD;
3) Perform periodic audits to confirm that the monitoring reports and test data were accurately recorded and maintained; and,
4) Perform audits to confirm that the raw data was properly recorded, validated, reduced, summarized, and interpreted.

5.7 DATA REPORTING

All data deliverables from the laboratory were paginated in ascending order. The laboratory kept a copy of the paginated package in order to be able to respond efficiently to data validation inquiries. Any errors in reporting identified during the data validation process were corrected by the laboratory as requested. All data validation inquiries to the laboratory were addressed by a written response from the laboratory. The data deliverable required for this project included a case narrative, the sample results (Form 1s), blank data, MS/MSD percent recoveries and relative percent differences, laboratory control sample percent recoveries, and any other quality control data.

A. The data for the HWMU soil sampling results performed in 2014 and 2015 can be found in the Tables section.

1) Table 1 – Post-Excavation Soil Data (Lab Analysis)
2) Table 2 – Post-Excavation Soil Data (Raw XRF Analysis)
3) Table 3 – Post-Excavation Soil Data (Corrected XRF Analysis)
4) The figures section includes post-excavation survey drawings of each HWMU excavation area that also feature a summary table of the final post-excavation soil results for that excavation.

B. On April 6, 2015, Advanced GeoServices transmitted a data package to IDEM that contained the entirety of post-excavation laboratory results received at that time. IDEM provided comments on May 19, 2015 which indicated a concern that some of the samples had been received by the lab at elevated temperatures and several days or even weeks after sample collection. Advanced GeoServices data validation personnel reviewed the comments and we offer the following response:

> The sample sets received outside of the requested 4 ± 2 degrees Celsius, included analysis for Total Metals and % Moisture. A review of the method SW-846 Chapter 3 does not require that samples be preserved/received at a temperature <6°C for analysis by USEPA Methods 6010 nor does the ASTM D2974-87 method for % Moisture. The CLP method, ISM02.2 does require all samples be preserved/received <6°C, but this was not the methodology proposed for analysis in the CMD or used by the laboratory. The USEPA National Functional Guidelines for Inorganic Superfund Data Review, August 2014 allows for professional judgement when validating ICP data for samples received >10°C and not maintained <6°C as well as the J-/R qualifiers.

It is the opinion of Advanced GeoServices data validation personnel that the metals analysis utilizing USEPA Method 6010 do not require the samples to be maintained at a temperature <6°C; therefore, the results should not be biased based solely on temperature receipt. The USEPA Method hold time for metals analysis is 180 days. The samples received 22 days after sampling were received and analyzed by the laboratory well within the method hold times. Based on these factors, the soil data generated in 2014 is useable and accurate.

6.0 HEALTH AND SAFETY

The Remediation Contractor developed a Health and Safety Plan (HASP) and submitted a final revised version on August 6, 2014. The HASP was prepared in accordance to the Final CMD specification Section 01351- Health and Safety Plan Requirements. Each person entering the Site was required to review the HASP with the onsite Health and Safety Officer and sign a sheet indicating that the information in the HASP was understood. The HASP conformed to the following sections:

- Final CMD (including attachments)
- United States Federal Government- Code of Federal Regulations (CFR)
  - 29 CFR 1910- Occupational Safety and Health Standards
  - 29 CFR 1910.120- Hazardous Waste Operations and Emergency Response
  - 29 CFR 1910.134- Respiratory Protection
  - 29 CFR 1910.1200 Hazard Communication
  - 29 CFR 1926- Construction Standards
  - 29 CFR 1910.1025- Lead in Construction

The Remediation Contractor provided a full-time Site Safety Officer (SSO) to implement and manage the Health and Safety program. The duties of the SSO included:

- Limit exposures if anyone working onsite could be exposed;
- Conduct health and safety audits and review field activities for performance;
- Maintain safety awareness among any person working at the Site;
- Review project plans and revisions to determine if health and safety program procedures were maintained during work activities;
- Notify RMC and Advanced GeoServices of the need to initiate corrective actions in the event of an emergency or accident;

- Notify onsite personnel to alter work practices that are deemed unsafe;
- Suspend onsite personnel from violating requirements of the HASP;
- Coordinate with emergency response personnel and medical support facilities in the event of an emergency;
- Monitor health and safety conditions during working hours;
- Conduct daily safety talks, and,
- Familiarize all Site visitors and subcontractors with the HASP.

Mr. Zakary Arnhold was the Remediation Contractor's SSO and reported to Luther Keyes, the Site Superintendent, on any issues or concerns involving worker and Site safety. Mr. Arnold also reported to Aaron Farrell, the corporate Health and Safety Manager, and the Project Managers for the RMC-Beech Grove project. The SSO also managed the air monitoring program onsite including the hi-volume air samplers placed around the perimeter of the Site and the Dustrak units surrounding the perimeter of the work zone. Air monitoring results were recorded and reported to Advanced GeoServices and RMC on a weekly basis.

The Remediation Contractor tabulated and recorded weekly updates to the Health and Safety program including any changes or incidents. Safe work hours were recorded for Remediation Contractor employees, sub-contractors, visitors and other vendors or personnel visiting the Site. This information was provided in weekly reports submitted by the Remediation Contractor and was presented in the weekly meeting agenda for discussions during the progress meetings.

During the early stages of the project, Level C PPE was worn by anyone entering the work zone. The SSO frequently administered personal air pumps that were placed on individuals or inside equipment working in excavation areas. The cartridges measured the employee exposure to lead over the work day and a determination was made by the SSO if the level of personal protection could be reduced based on laboratory results compared to OSHA Permissible Exposure Limit (PEL) levels. The work zone was identified by the SSO with barriers and signage. Boot wash

stations, PPE only identified waste cans, emergency spill kits, first aid kits and fire extinguishers were in place for each work area.

Prior to employees working onsite, Advanced GeoServices and RMC were provided health and safety documentation including OSHA 40-hour training certificates, OSHA 8-hour refresher training certificates, respirator fit test results and pre-/post-work blood lead testing results. Subcontractors working onsite were also required to provide the aforementioned documentation. The SSO maintained clean working conditions including a sanitization area, potable drinking water and PPE necessary for weather and changing working conditions.

No OSHA recordable incidents occurred during the periods of work in 2014 and 2015. For the 2014 work onsite there were 113 days without any OSHA recordable incident resulting in 8,749.50 project man hours. For the 2015 work there were 94 days without any OSHA recordable incident resulting in an additional 6,380.35 man-hours worked by Site personnel.

7.0 OPERATION AND MAINTENANCE

The CMD included an Operation and Maintenance (O&M) Plan as Attachment E.

The O&M Plan is being revised to incorporate the final post-CMI Site conditions and will be provided as part of the CMI Completion Report that is being prepared for USEPA upon completion of the 2016 restoration activities. The revised O&M Plan will consolidate the concepts that were presented in the CMD with the storm water O&M Manual that is part of the DCE drainage permit, and the groundwater monitoring requirements of the MNA Work Plan presented in the CMD. IDEM will be provided with a copy for review.

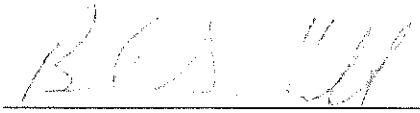
In general, the majority of the O&M tasks will focus on the inspection of erosion and sediment controls, containment cell stability, vegetative growth, storm water management features, and Site security. Groundwater monitoring will continue for the containment cell monitoring network and the monitored natural attenuation (MNA) network as required by the MNA Work Plan (Appendix H of the CMD).

The first post-remediation groundwater sampling event occurred in December 2015. As described in the CMD and MNA Work Plan, quarterly groundwater monitoring will continue for the first two (2) years. The third and fourth years following the remediation will utilize semi-annual sampling. Annual sampling will occur in the fifth year and beyond.

It should be noted that the groundwater monitoring that was being performed as part of the Groundwater Monitoring Plan (GWMP) dated June 8, 2007 was associated with the onsite Lagoon. The Lagoon soil remediation was completed in October 2014 as described in Section 3.3. Once the Lagoon closure is approved by IDEM, the monitoring associated with the GWMP will cease.

8.0 CLOSURE PLAN CERTIFICATION STATEMENT

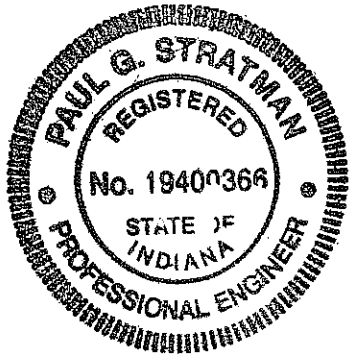
I certify, under penalty of law, that this document and all appendixes and attachments as applicable were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

EPA ID IND000718130	Former Refined Metals Facility-Beech Grove, Indiana
U.S. EPA Identification No.	Facility Name
	Brad S. Kalter, Secretary
Signature of Owner or Operator	Name and Title
July 11, 2016	
Date	

9.0 CLOSURE CERTIFICATION STATEMENT

The hazardous waste management unit(s) at the facility described in the closure plan has (have) been closed in accordance with the specifications in the approved closure plan. I certify under penalty of law that this document and all appendixes and attachments as applicable were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons that manage the system or of persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

EPA ID IND000718130	Former Refined Metals Facility-Beech Grove, Indiana
U.S. EPA Identification No.	Facility Name
Signature of Registered P.E.	Name of P.E. and Registration No.
7/11/12	
Date	



TABLES

Confirmatory Sample Results (Lab Analysis)

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 1 - CONFIRMATORY SAMPLE RESULTS (Pace Lab)

Sample Location			WP1A/SIDE WALL-Y			WP1A/SIDE WALL-Z			WPIA/2.5-3.0/A5			WPIA/3.0-3.5/A5			WPIA/2.5-3.0/A6			WPIA/3.0-3.5/A6			WPIA/2.5-3.0/A7			WPIA/3.0-3.5/A7			WP1A/3.0-3.5/B6		
Lab ID			50128377002			50128377003			50127652002			50127652003			50127652006			50127652007			50127652009			50127652010			50127781004		
Sample Date			9/23/2015			9/23/2015			9/12/2015			9/12/2015			9/12/2015			9/12/2015			9/12/2015			9/12/2015			9/15/2015		
Matrix			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil		
Remarks		HWMU																										
Parameter	**Units**	PRG	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Metals																												
Antimony	mg/kg	37		U	1.1		U	1		U	1.1	1		1	53.8		1.2		U	1.1		U	0.97		U	0.97		U	1.1
Arsenic	mg/kg	20	10.1		1.1	9.9		1	7.6		1.1	6.9		1	45.8		1.2	11.1		1.1	6.8		0.97	8.2		0.97	8.7		1.1
Cadmium	mg/kg	77	0.54		0.53	0.54		0.5		U	0.56		U	0.5	5.8		0.58		U	0.53		U	0.48		U	0.49		U	0.57
Lead	mg/kg	970	7.4		1.1	27.4		1	34.4		1.1	222		1	20900		5.8	11.2		1.1	7.5		0.97	11.7		0.97	7.7		1.1
Selenium	mg/kg	53		U	1.1		U	1		U	1.1		U	1	1.7		1.2		U	1.1		U	0.97		U	0.97		U	1.1
Conventionals																												
Percent Moisture	%	NS	17.6		0.1	9.6		0.1	13.4		0.1	10.4		0.1	16.3		0.1	18.7		0.1	11.8		0.1	11		0.1	15.1		0.1

Highlighted results: sample exceeds Target Closure Concentration for this parameter
mg/kg: milligrams per kilogram

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 1 - CONFIRMATORY SAMPLE RESULTS (Pace Lab)

Sample Location			WP1A/3.0-3.5/B6-D			WP1A/3.5-4.0/B6			WP1B/1.0-1.5/A2			WP1B/1.0-1.5/A3			WP1C/1.3-1.8/A2			WP1C/1.8-2.3/A2			WP1C/1.3-1.8/A3			WP1C/1.8-2.3/A3			WP1D/3.8-4.3/A1			WP1D/3.3-3.8/A3		
Lab ID			50127781005			50127781006			50106349001			50106349002			50107489007			50107489005			50107489006			50107489004			50104924001			50104924002		
Sample Date			9/15/2015			9/15/2015			10/28/2014			10/29/2014			11/19/2014			11/19/2014			11/19/2014			11/19/2014			10/2/2014			10/2/2014		
Matrix			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil		
Remarks		HWMU	FD of																													
Parameter	**Units**	PRG	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Metals																																
Antimony	mg/kg	37		U	1.1		U	1.1	15.6		0.98		U	1.2		U	1.1		U	1.1		U	0.97		U	1.1	1.9		0.98	2.1		1.1
Arsenic	mg/kg	20	7.9		1.1	10.6		1.1	12.6		0.98	12.8		1.2	9.3		1.1	7.5		1.1	8.6		0.97	7.6		1.1	6.7		0.98	9.6		1.1
Cadmium	mg/kg	77		U	0.54		U	0.56	1.2		0.49		U	0.61	4		0.55	1.3		0.54		U	0.48		U	0.53	0.63		0.49	1.8		0.54
Lead	mg/kg	970	7.2		1.1	9		1.1	1740		0.98	34.3		1.2	6.8		1.1	6.2		1.1	7.8		0.97	15.1		1.1	124		0.98	516		1.1
Selenium	mg/kg	53		U	1.1		U	1.1	2.6		0.98		U	1.2		U	1.1		U	1.1		U	0.97		U	1.1		U	0.98		U	1.1
Conventionals																																
Percent Moisture	%	NS	16.5		0.1	15.7		0.1	13.6		0.1	19.3		0.1	11.1		0.1	11.6		0.1	10.6		0.1	10.8		0.1	10.9		0.1	13.1		0.1

Highlighted results: sample exceed:Target Closure Concentration for this parameter
mg/kg: milligrams per kilogram

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 1 - CONFIRMATORY SAMPLE RESULTS (Pace Lab)

Sample Location			WPID/3.3-3.8/A3			WPID/3.8-4.3/A3			WPID/3.8-4.3/A1			WP1DX/SIDE WALL-A			WP1DX/SIDE WALL-C			WP1DX/SIDE WALL-F			WP1DX/2.5-3.0/A3			WP1DX/3.5-4.0/A5			WP2A/SIDE WALL-A			WP2A/SIDE WALL-C2		
Lab ID			50105301007			50105301008			50105301009			50107082001			50107082002			50107082003			50107082004			50107082005			50107082006			50107489003		
Sample Date			10/2/2014			10/2/2014			10/2/2014			11/13/2014			11/13/2014			11/14/2014			11/14/2014			11/14/2014			11/10/2014			11/20/2014		
Matrix			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil		
Remarks		HWMU																														
Parameter	**Units**	PRG	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Metals																																
Antimony	mg/kg	37	3.2		1	1.9		1.1	1.4		1	2.1		1	7.3		0.95	2.1		1		U	1.1		U	0.99	2.4		1.1		U	1
Arsenic	mg/kg	20	11.7		1	10.6		1.1	8.4		1	10.6		1	6.1		0.95	9		1	8.6		1.1	7.8		0.99	11.8		1.1	10.9		1
Cadmium	mg/kg	77	1.4		0.52	1.1		0.54	0.81		0.51	0.73		0.52	0.57		0.47	1.3		0.5		U	0.53		U	0.5	0.89		0.53	2		0.5
Lead	mg/kg	970	515		1	325		1.1	430		1	184		1	228		0.95	681		1	8.3		1.1	7.5		0.99	459		1.1	58.5		1
Selenium	mg/kg	53		U	1		U	1.1		U	1		U	1		U	0.95		U	1		U	1.1		U	0.99		U	1.1		U	1
Conventionals																																
Percent Moisture	%	NS	12.7		0.1	14.9		0.1	13.3		0.1	12		0.1	11.5		0.1	14.9		0.1	10.8		0.1	11.7		0.1	11.3		0.1	10.6		0.1

Highlighted results: sample exceed:Target Closure Concentration for this parameter
mg/kg: milligrams per kilogram

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 1 - CONFIRMATORY SAMPLE RESULTS (Pace Lab)

Sample Location			WP2A/SIDE WALL-D2			WP2A/SIDE WALL-E			WP2A/SIDE WALL-F2			WP2A/7.3-7.8/A3			WP2B/3.0-3.5/A3			WP2B/3.0-3.5/A4			WP2C/SIDE WALL-A2			WP2C/SIDE WALL-C			WP2C/SIDE WALL-D2			WP2C/1.5-2.0/A2		
Lab ID			50107489001			50107082007			50107489002			50107082008			50106925001			50106925002			50106569001			50106299002			50106569002			50106299001		
Sample Date			11/20/2014			11/12/2014			11/20/2014			11/11/2014			11/5/2014			11/5/2014			11/4/2014			10/27/2014			11/4/2014			10/27/2014		
Matrix			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil		
Remarks		HWMU																														
Parameter	**Units**	PRG	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Metals																																
Antimony	mg/kg	37	1.2		1	2.2		1.2		U	1.2	2.2		1	1.6		0.96		U	1.1	2.2		1.1	7.8		1.2		U	1.2		U	1
Arsenic	mg/kg	20	11.8		1	12.6		1.2	80.6		1.2	8.1		1	8.4		0.96	10.5		1.1	20.1		1.1	20.2		1.2	12		1.2	9.1		1
Cadmium	mg/kg	77	4.2		0.52	0.98		0.59	0.62		0.61	0.52		0.52		U	0.48		U	0.56	0.88		0.56	13.4		0.62		U	0.58	0.56		0.5
Lead	mg/kg	970	99.1		1	186		1.2	48.5		1.2	112		1	53		0.96	10.1		1.1	184		1.1	2450		1.2	120		1.2	120		1
Selenium	mg/kg	53		U	1		U	1.2		U	1.2		U	1		U	0.96		U	1.1		U	1.1		U	1.2		U	1.2		U	1
Conventionals																																
Percent Moisture	%	NS	19.8		0.1	18.6		0.1	19		0.1	12.3		0.1	10.8		0.1	18.9		0.1	15.7		0.1	20.8		0.1	19.9		0.1	16.1		0.1

Highlighted results: sample exceed:Target Closure Concentration for this parameter
mg/kg: milligrams per kilogram

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 1 - CONFIRMATORY SAMPLE RESULTS (Pace Lab)

Sample Location			WP3A/SIDE WALL-A4			WP3A/SIDE WALL-C2			WP3B/SIDE WALL-A2			WP3B/SIDE WALL-B4			WP3A/SIDE WALL/A2			WP3A/1.8-2.3/A1			WP3A/1.3-1.8/A2			WP3A-D/1.3-1.8/A2			WP3A/1.8-2.3/A2			WP3A/2.0-2.5/B1		
Lab ID			50128377004			50106215002			50106215001			50106349003			50104924004			50104651007			50104651004			50104651005			50104651001			50104924003		
Sample Date			9/23/2015			10/2/2014			10/9/2014			11/1/2014			10/2/2014			9/29/2014			9/29/2014			9/29/2014			9/29/2014			10/2/2014		
Matrix			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil		
Remarks		HWMU																						FD of								
Parameter	**Units**	PRG	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Metals																																
Antimony	mg/kg	37		U	1	12		1.1	2.2		0.96	1.9		0.96	20.4		1.1	11.8		0.97	2.1		1	2.1		0.98	23.6		1	1.2		0.97
Arsenic	mg/kg	20	7.2		1	37.3		1.1	11.2		0.96	9.2		0.96	26.2		1.1	12.2		0.97	9.8		1	9.4		0.98	13.5		1	8.2		0.97
Cadmium	mg/kg	77		U	0.5	10.8		0.53	15		0.48	4.7		0.48	9.4		0.55	3.5		0.48	1.1		0.5	0.84		0.49	9.8		0.5	1.1		0.48
Lead	mg/kg	970	26.2		1	3530		1.1	222		0.96	392		0.96	3590		1.1	3110		0.97	910		1	831		0.98	3320		1	273		0.97
Selenium	mg/kg	53		U	1	1.2		1.1		U	0.96		U	0.96	1.2		1.1		U	0.97		U	1		U	0.98	1.2		1		U	0.97
Conventionals																																
Percent Moisture	%	NS	11.3		0.1	10.2		0.1	11.6		0.1	9.3		0.1	10.5		0.1	13.7		0.1	8.4		0.1	8.7		0.1	7.5		0.1	11.2		0.1

Highlighted results: sample exceed:Target Closure Concentration for this parameter
mg/kg: milligrams per kilogram

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 1 - CONFIRMATORY SAMPLE RESULTS (Pace Lab)

Sample Location			WP3A/3.0-3.5/C3			WP3A/3.5-4.0/C1			WP3B/3.3-3.8/A3			WP3B/3.8-4.3/A3			WP3B-A3-6-12'			WP6A/1.0-1.5/A4			WP6A/1.0-1.5/A9			WP6A/1.5-2.0/A6			WP6B/1.0-1.5/A3			WP6B/1.5-2.0/A3		
Lab ID			50104996002			50104996001			50104651006			50104651002			50104497001			50104381001			50104924005			50104651003			50104306001			50104306002		
Sample Date			10/6/2014			10/6/2014			9/29/2014			9/29/2014			9/27/2014			9/25/2014			10/2/2014			9/29/2014			9/24/2014			9/24/2014		
Matrix			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil			Soil		
Remarks		HWMU																														
Parameter	**Units**	PRG	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**	**Result**	**Q**	**RL**
Metals																																
Antimony	mg/kg	37	1.5		1.1	2.8		1	15.6		0.95	3.8		1	4.4		0.96	4.1		1.2	1.4		1.3		U	1.1	19.5		0.97		U	1
Arsenic	mg/kg	20	4.7		1.1	8.7		1	19.4		0.95	11.5		1	11		0.96	14.2		1.2	12.5		1.3	9.7		1.1	19.3		0.97	8.6		1
Cadmium	mg/kg	77	0.79		0.54	1.5		0.51	3.2		0.47	6.1		0.51	3.2		0.48	4.5		0.58		U	0.63		U	0.54	2.9		0.48		U	0.51
Lead	mg/kg	970	391		1.1	471		1	1960		0.95	1290		1	1810		0.96	200		1.2	46		1.3	15.4		1.1	2530		0.97	24.8		1
Selenium	mg/kg	53		U	1.1		U	1		U	0.95		U	1		U	0.96		U	1.2		U	1.3		U	1.1		U	0.97		U	1
Conventionals																																
Percent Moisture	%	NS	17.6		0.1	16		0.1	11.2		0.1	13.7		0.1	12.4		0.1	18.5		0.1	21.4		0.1	15.4		0.1	9.6		0.1	10.7		0.1

Highlighted results: sample exceed:Target Closure Concentration for this parameter
mg/kg: milligrams per kilogram

Confirmatory Sample Results (Raw XRF Analysis)

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-WP1A/2.5-3.0/A1	2,112.1	0.2	65.0	1.6	8.3
XRF-WP1A/3.0-3.5/A1	-73.5	-2.4	3.1	-1.3	6.1
XRF-WP1A/2.5-3.0/A2	66.9	-2.4	9.2	-1.3	5.0
XRF-WP1A/3.0-3.5/A2	-60.9	-2.4	7.7	-1.3	5.9
XRF-WP1A/2.5-3.0/A3	-19.8	-2.4	3.3	-1.3	7.6
XRF-WP1A/3.0-3.5/A3	-50.7	-2.4	8.5	-1.3	7.4
XRF-WP1A/2.5-3.0/A4	-80.9	-2.4	6.2	-1.3	5.9
XRF-WP1A/3.0-3.5/A4	-90.2	-2.4	6.5	1.2	4.7
XRF-WP1A/Sidewall-A	138.2	-2.4	3.3	-1.3	5.7
XRF-WP1A/Sidewall-B	1,322.3	8.3	10.4	-1.3	6.9
XRF-WP1A/Sidewall-C	11,547.6	39.6	243.0	5.9	14.4
XRF-WP1A/Sidewall-D	73,239.1	304.2	1,089.6	77.1	0.0
XRF-WP1A/Sidewall-E	31,090.9	110.6	311.5	29.8	10.6
XRF-WP1A/3.5-4.0/B1	-95.0	-2.4	5.0	-1.3	5.0
XRF-WP1A/4.0-4.5/B1	-92.9	-2.4	4.5	-1.3	5.1
XRF-WP1A/Sidewall-B2	1,106.7	0.7	28.0	-1.3	6.6
XRF-WP1A/Sidewall-C2	91.4	-2.4	5.8	-1.3	10.1
XRF-WP1A/Sidewall-D2	82.1	-2.4	6.3	-1.3	5.1
XRF-WP1A/Sidewall-E2	16.1	-2.4	7.0	-1.3	5.9
XRF-WP1B/1.0-1.5/A1	-26.2	-2.4	3.7	-1.3	6.4
XRF-WP1B/1.5-2.0/A1	100,000.0	519.0	5,923.0	302.5	0.0
XRF-WP1B/1.0-1.5/A2	823.1	-2.4	5.5	-1.3	7.3
XRF-WP1B/1.5-2.0/A2	-90.4	-2.4	7.4	-1.3	6.7
XRF-WP1B/1.0-1.5/A3	394.8	-2.4	14.1	-1.3	5.4
XRF-WP1B/1.5-2.0/A3	-37.0	-2.4	7.5	-1.3	5.0
XRF-WP1B/Sidewall-A	58,562.3	125.4	1,413.2	74.6	6.6
XRF-WP1B/Sidewall-B	3,252.1	0.2	134.4	-1.3	7.9
XRF-WP1B/2.0-2.5/B1	-94.2	-2.4	5.1	-1.3	6.0
XRF-WP1B/2.5-3.0/B1	-98.4	-2.4	4.7	-1.3	5.3
XRF-WP1B/Sidewall-A2	4,519.4	26.8	9.4	-1.3	6.9
XRF-WP1B/Sidewall-B2	-88.1	-2.4	3.5	-1.3	5.7

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-WP1B/Sidewall-A3	*-36.0*	*-2.4*	*3.8*	*-1.3*	*7.3*
XRF-WP1C/1.3-1.8/A1	*-91.0*	*-2.4*	*7.9*	*1.8*	*5.3*
XRF-WP1C/1.8-2.3/A1	*493.1*	*-2.4*	*2.5*	*-1.3*	*5.7*
XRF-WP1C/1.3-1.8/A2	*NT*	*NT*	*NT*	*NT*	*NT*
XRF-WP1C/1.8-2.3/A2	*NT*	*NT*	*NT*	*NT*	*NT*
XRF-WP1C/1.3-1.8/A3	*NT*	*NT*	*NT*	*NT*	*NT*
XRF-WP1C/1.8-2.3/A3	*NT*	*NT*	*NT*	*NT*	*NT*
XRF-WP1D/3.3-3.8/A1	*-75.6*	*2.8*	*6.5*	*2.2*	*0.0*
XRF-WP1D/3.8-4.3/A1	*283.9*	*-2.4*	*8.8*	*-1.3*	*0.0*
XRF-WP1D/3.3-3.8/A2	*-63.2*	*1.6*	*6.1*	*-1.3*	*0.0*
XRF-WP1D/3.8-4.3/A2	*-63.1*	*0.5*	*3.9*	*0.1*	*0.0*
XRF-WP1D/3.3-3.8/A3	*722.7*	*0.3*	*17.3*	*0.4*	*0.0*
XRF-WP1D/3.8-4.3/A3	*172.2*	*5.2*	*12.1*	*3.0*	*0.0*
XRF-WP1D-Sidewall-A	*180.4*	*10.8*	*3.7*	*2.9*	*0.0*
XRF-WP1D-Sidewall-B	*1,777.3*	*1.8*	*15.7*	*-1.3*	*0.0*
XRF-WP1D/Sidewall-B2	*3,232.7*	*21.1*	*13.5*	*1.4*	*5.3*
XRF-WP1DX/3.0-3.5/A1	*-56.5*	*-2.4*	*5.5*	*-1.3*	*6.4*
XRF-WP1DX/3.5-4.0/A1	*-90.8*	*-2.4*	*4.8*	*-1.3*	*6.3*
XRF-WP1DX/3.0-3.5/A2	*-88.1*	*-2.4*	*7.5*	*-1.3*	*4.3*
XRF-WP1DX/3.5-4.0/A2	*-92.0*	*-2.4*	*4.2*	*-1.3*	*5.9*
XRF-WP1DX/2.0-2.5/A3	*-38.7*	*-2.4*	*7.0*	*-1.3*	*5.9*
XRF-WP1DX/2.5-3.0/A3	*-92.4*	*-2.4*	*6.2*	*-1.3*	*6.1*
XRF-WP1DX/3.0-3.5/A4	*-78.8*	*-2.4*	*4.6*	*-1.3*	*6.3*
XRF-WP1DX/3.5-4.0/A4	*-86.1*	*-2.4*	*4.1*	*-1.3*	*6.0*
XRF-WP1DX/3.0-3.5/A5	*-90.4*	*-2.4*	*5.4*	*-1.3*	*5.4*
XRF-WP1DX/3.5-4.0/A5	*-95.0*	*-2.4*	*4.9*	*-1.3*	*5.7*
XRF-WP1DX/Sidewall-A	*540.3*	*-2.4*	*22.1*	*-1.3*	*5.4*
XRF-WP1DX/Sidewall-B	*-76.4*	*-2.4*	*4.7*	*6.7*	*4.7*
XRF-WP1DX/Sidewall-C	*476.0*	*-2.4*	*13.8*	*-1.3*	*7.0*
XRF-WP1DX/Sidewall-D	*-60.0*	*-2.4*	*5.6*	*-1.3*	*6.0*
XRF-WP1DX/Sidewall-E	*3,779.0*	*3.2*	*17.3*	*3.3*	*10.7*
XRF-WP1DX/Sidewall-F	*1,099.2*	*-2.4*	*11.4*	*-1.3*	*6.9*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-WP1DX/Sidewall-G	168.1	-2.4	8.5	-1.3	6.1
XRF-WP1DX/Sidewall-H	4,549.6	0.8	103.8	8.4	8.9
XRF-WP1DX/Sidewall-I	14,920.7	8.1	271.1	2.2	5.0
XRF-WP1DX/Sidewall-J	234.8	-2.4	5.8	-1.3	6.6
XRF-WP1DX/Sidewall-K	23,572.4	45.4	92.0	17.2	8.7
XRF-WP1DX/Sidewall-L	1,103.5	1.3	38.8	14.9	8.0
XRF-WP1DX/Sidewall-M	5,573.9	22.9	9.9	-1.3	9.0
XRF-WP1DX/Sidewall-N	-37.4	-2.4	4.9	-1.3	5.7
XRF-WP1DX/Sidewall-H2	-92.9	-2.4	4.8	-1.3	5.1
XRF-WP1DX/Sidewall-I2	-87.7	-2.4	5.1	-1.3	5.7
XRF-WP1DX/Sidewall-K2	-91.7	-2.4	4.5	-1.3	4.1
XRF-WP1DX/Sidewall-L2	-42.2	-2.4	6.0	-1.3	5.7
XRF-WP1DX/Sidewall-M2	-92.5	-2.4	5.2	-1.3	6.1
XRF-WP2A/7.3-7.8/A1	85.4	-2.4	10.5	-1.3	6.7
XRF-WP2A/7.8-8.3/A1	488.1	-2.4	11.1	-1.3	5.4
XRF-WP2A/7.3-7.8/A2	-90.2	-2.4	4.6	-1.3	5.9
XRF-WP2A/7.8-8.3/A2	367.9	-2.4	4.8	-1.3	6.3
XRF-WP2A/7.3-7.8/A3	408.6	-2.4	13.3	-1.3	4.9
XRF-WP2A/7.8-8.3/A3	-92.1	-2.4	5.1	-1.3	5.7
XRF-WP2A/Sidewall-A	422.4	-2.4	13.9	-1.3	5.9
XRF-WP2A/Sidewall-B	163.7	-2.4	9.5	-1.3	6.0
XRF-WP2A/Sidewall-C	1,115.1	-1.4	31.4	2.4	8.0
XRF-WP2A/Sidewall-D	12,504.4	59.8	533.8	65.6	11.6
XRF-WP2A/Sidewall-E	1,101.0	0.0	17.4	-1.3	4.6
XRF-WP2A/Sidewall-F	2,627.6	6.8	88.2	-1.3	4.6
XRF-WP2A/Sidewall-G	-64.4	-2.4	5.5	-1.3	4.7
XRF-WP2A/Sidewall-H	37.4	-2.4	7.2	-1.3	5.1
XRF-WP2A/Sidewall-I	-94.2	-2.4	6.1	-1.3	5.3
XRF-WP2B/2.5-3.0/A1	5,638.4	11.7	10.5	2.2	13.3
XRF-WP2B/3.0-3.5/A1	-92.9	-2.4	5.3	-1.3	4.0
XRF-WP2B/2.5-3.0/A2	-94.4	-2.4	6.9	-1.3	5.3
XRF-WP2B/3.0-3.5/A2	-97.8	-2.4	6.3	-1.3	5.3
XRF-WP2B/2.5-3.0/A3	-92.8	-2.4	5.0	-1.3	5.9

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-WP2B/3.0-3.5/A3	32.1	-2.4	8.4	-1.3	5.7
XRF-WP2B/2.5-3.0/A4	-92.1	-2.4	5.9	-1.3	5.7
XRF-WP2B/3.0-3.5/A4	-92.0	-2.4	6.7	-1.3	5.3
XRF-WP2B/2.5-3.0/A5	-77.9	-2.4	5.8	-1.3	5.0
XRF-WP2B/3.0-3.5/A5	-90.6	-2.4	6.3	-1.3	5.6
XRF-WP2B/Sidewall-A	60,451.3	185.9	1,566.3	108.8	11.7
XRF-WP2B/Sidewall-B	7,101.3	16.6	143.7	28.3	7.4
XRF-WP2B/Sidewall-C	1,796.0	-2.4	12.1	2.2	9.1
XRF-WP2B/Sidewall-D	20,262.7	102.7	228.6	128.6	5.9
XRF-WP2B/Sidewall-E	91.2	-2.4	625.6	-1.3	5.6
XRF-WP2B/4.5-5.0/B1	-85.3	-2.4	4.6	-1.3	7.1
XRF-WP2B/5.0-5.5/B1	-89.8	-2.4	5.2	-1.3	5.6
XRF-WP2B/sidewall-A2	3,442.6	3.3	135.7	-1.3	9.4
XRF-WP2B/sidewall-B2	4,929.4	13.5	87.9	-1.3	7.9
XRF-WP2B/sidewall-C2	-30.7	-2.4	6.9	-1.3	5.6
XRF-WP2B/sidewall-D2	2,258.0	4.6	70.1	-1.3	7.9
XRF-WP2B/sidewall-E2	19,089.0	69.6	381.9	14.0	9.3
XRF-WP2C/1.0-1.5/A1	-91.6	-2.4	5.5	41.0	6.3
XRF-WP2C/1.5-2.0/A1	-93.8	-2.4	5.2	20.6	4.7
XRF-WP2C/1.0-1.5/A2	-97.3	-2.4	4.8	-1.3	5.1
XRF-WP2C/1.5-2.0/A2	110.0	-2.4	8.6	-1.3	6.0
XRF-WP2C/1.0-1.5/A3	-77.7	-2.4	6.3	-1.3	6.3
XRF-WP2C/1.5-2.0/A3	-95.0	-2.4	5.1	-1.3	4.7
XRF-WP2C/Sidewall-A	14,306.3	22.8	337.3	-1.3	8.0
XRF-WP2C/Sidewall-B	5,040.9	19.8	104.1	-1.3	7.0
XRF-WP2C/Sidewall-C	937.5	-2.4	8.8	-1.3	6.6
XRF-WP2C/Sidewall-D	1,132.9	-2.4	36.0	-1.3	7.7
XRF-WP2C/Sidewall-A2	1,292.4	-2.4	45.8	-1.3	6.0
XRF-WP2C/Sidewall-C2	2,820.6	5.3	30.4	-1.3	7.4
XRF-WP2C/Sidewall-D2	643.9	-2.4	26.7	-1.3	5.6

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-WP3A/1.3-1.8/A1	*8,768.4*	*48.8*	*18.5*	*17.5*	*9.4*
XRF-WP3A/1.8-2.3/A1	*1,724.6*	*12.4*	*13.5*	*10.2*	*1.3*
XRF-WP3A/1.3-1.8/A2	*682.2*	*10.0*	*13.8*	*6.9*	*0.0*
XRF-WP3A/1.8-2.3/A2	*1,293.0*	*-1.4*	*37.7*	*-1.3*	*1.3*
XRF-WP3A/1.3-1.8/A3	*5,774.0*	*28.5*	*186.9*	*24.5*	*1.7*
XRF-WP3A/1.8-2.3/A3	*19.5*	*9.3*	*14.1*	*9.0*	*0.0*
XRF-WP3A/sidewall-A	*20,114.3*	*48.9*	*356.7*	*51.5*	*0.0*
XRF-WP3A/sidewall-B	*5,218.6*	*24.4*	*151.5*	*76.4*	*3.9*
XRF-WP3A/sidewall-C	*1,484.3*	*4.0*	*63.4*	*6.1*	*0.0*
XRF-WP3A/2.0-2.5/B1	*287.9*	*8.4*	*4.9*	*5.5*	*1.0*
XRF-WP3A/2.5-3.0/B1	*-68.0*	*4.8*	*2.4*	*4.5*	*0.0*
XRF-WP3A/2.0-2.5/B2	*2,161.0*	*8.4*	*68.0*	*5.5*	*0.0*
XRF-WP3A/2.5-3.0/B2	*23.7*	*1.2*	*5.6*	*2.2*	*1.1*
XRF-WP3A/2.0-2.5/B3	*-59.7*	*-2.4*	*4.3*	*-1.3*	*0.0*
XRF-WP3A/2.5-3.0/B3	*-82.6*	*3.5*	*4.2*	*2.5*	*0.0*
XRF-WP3A/Sidewall-A2	*1,243.6*	*16.6*	*25.4*	*9.1*	*0.0*
XRF-WP3A/Sidewall-B2	*1,774.6*	*10.9*	*72.7*	*8.7*	*0.0*
XRF-WP3A/Sidewall-C2	*2,504.0*	*10.7*	*81.0*	*11.8*	*0.0*
XRF-WP3A/3.0-3.5/C1	*-80.9*	*-1.1*	*12.2*	*4.2*	*0.0*
XRF-WP3A/3.5-4.0/C1	*615.4*	*-2.4*	*5.3*	*-1.3*	*0.0*
XRF-WP3A/3.0-3.5/C2	*-73.7*	*-2.4*	*0.9*	*-1.3*	*0.0*
XRF-WP3A/3.5-4.0/C2	*2,343.6*	*-2.4*	*23.1*	*-1.3*	*1.1*
XRF-WP3A/3.0-3.5/C3	*1,087.1*	*-2.4*	*8.9*	*-1.3*	*0.0*
XRF-WP3A/3.5-4.0/C3	*6,643.1*	*9.9*	*40.9*	*3.7*	*4.1*
XRF-WP3A/sidewall-A3	*16,079.3*	*36.0*	*206.4*	*16.2*	*0.0*
XRF-WP3A/sidewall-B3	*5,394.6*	*7.8*	*137.2*	*10.8*	*0.0*
XRF-WP3A/sidewall-C3	*2,536.6*	*7.0*	*118.3*	*-1.3*	*3.7*
XRF-WP3A/4.0-4.5/D2	*-91.2*	*-2.4*	*5.4*	*-1.3*	*7.1*
XRF-WP3A/4.5-5.0/D2	*-93.3*	*-2.4*	*4.8*	*-1.3*	*6.0*
XRF-WP3A/4.0-4.5/D3	*-88.8*	*-2.4*	*5.3*	*-1.3*	*5.4*
XRF-WP3A/4.5-5.0/D3	*-93.3*	*-2.4*	*5.2*	*-1.3*	*5.1*
XRF-WP3A/sidewall-B4	*15,540.3*	*10.9*	*372.6*	*2.0*	*9.6*
XRF-WP3A/sidewall-C4	*258.7*	*-2.4*	*11.4*	*-1.3*	*6.7*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-WP3A/Sidewall-B5	5,929.3	2.2	168.8	-1.3	9.9
XRF-WP3A/Sidewall-B6	-33.8	-2.4	6.1	-1.3	5.9
XRF-WP3B/3.3-3.8-A1	-73.1	3.3	0.0	0.8	1.3
XRF-WP3B/3.8-4.3-A1	-84.0	5.1	1.4	5.0	0.0
XRF-WP3B/3.3-3.8-A2	-24.4	8.6	0.0	9.0	0.0
XRF-WP3B/3.8-4.3-A2	1,265.3	7.5	4.3	9.5	0.0
XRF-WP3B/3.3-3.8-A3	1,126.9	10.0	3.3	4.9	0.0
XRF-WP3B/3.8-4.3-A3	1,118.1	8.1	16.4	7.8	0.0
XRF-WP3B/sidewall-A	4,298.3	9.7	34.5	8.3	0.0
XRF-WP3B/sidewall-B	799.9	-0.4	10.9	2.1	0.0
XRF-WP3B/sidewall-C	42,757.0	139.2	818.2	74.2	5.6
XRF-WP3B/sidewall-D	296.8	24.7	119.8	129.6	714.7
XRF-WP3B/Sidewall-B3	1,628.7	-2.4	13.8	-1.3	7.0
XRF-WP3B/4.3-4.8/B2	2,095.1	0.5	25.0	7.0	6.3
XRF-WP3B/4.8-5.3/B2	3,025.6	4.8	72.3	28.6	0.0
XRF-WP3B/4.3-4.8/B3	-54.7	-2.4	3.3	-1.3	5.1
XRF-WP3B/4.8-5.3/B3	-12.9	-2.4	3.7	-1.3	4.0
XRF-WP3B/Sidewall-A2	981.7	-0.6	13.8	25.5	5.4
XRF-WP3B/Sidewall-C2	1,082.6	-2.4	30.4	-1.3	6.6
XRF-WP3B-5.3-5.8-C2	-96.4	-2.4	4.0	-1.3	5.7
XRF-WP3B-5.8-6.3-C2	-79.7	-2.4	4.4	-1.3	5.7
XRF-WP3B-Sidewall-B4	584.0	-2.4	11.9	-1.3	5.1
XRF-WP3B-Sidewall-C3	479.5	-2.4	9.2	-1.3	5.7
XRF-WP6A/1.0-1.5-A1	-93.1	-2.4	0.9	-1.3	0.0
XRF-WP6A/1.5-2.0-A1	-84.7	-2.4	0.0	-1.3	0.0
XRF-WP6A/1.0-1.5-A2	-100.7	-2.4	2.4	-1.3	1.9
XRF-WP6A/1.5-2.0-A2	-102.2	-2.4	2.6	-1.3	2.3
XRF-WP6A/1.0-1.5-A3	-92.9	-2.4	2.3	-1.3	2.0
XRF-WP6A/1.5-2.0-A3	-97.5	-2.4	3.6	-1.3	2.9
XRF-WP6A/1.0-1.5-A4	430.5	9.4	2.6	7.2	0.0
XRF-WP6A/1.5-2.0-A4	-11.5	6.8	3.3	4.4	0.0

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-WP6A/1.0-1.5-A5	*-85.7*	*3.3*	*2.4*	*3.1*	*0.0*
XRF-WP6A/1.5-2.0-A5	*-74.4*	*1.6*	*2.1*	*5.4*	*0.0*
XRF-WP6A/1.0-1.5-A6	*8.7*	*3.0*	*5.1*	*-1.3*	*0.0*
XRF-WP6A/1.5-2.0-A6	*-62.1*	*2.7*	*2.6*	*0.3*	*0.0*
XRF-WP6A/1.0-1.5-A7	*-38.4*	*1.2*	*5.3*	*0.1*	*0.0*
XRF-WP6A/1.5-2.0-A7	*-72.8*	*3.4*	*0.8*	*2.2*	*0.0*
XRF-WP6A/1.0-1.5-A8	*-72.4*	*2.1*	*5.1*	*2.2*	*6.3*
XRF-WP6A/1.5-2.0-A8	*-43.5*	*7.6*	*4.8*	*3.7*	*0.0*
XRF-WP6A/1.0-1.5-A9	*81.0*	*4.8*	*15.7*	*4.4*	*1.7*
XRF-WP6A/1.5-2.0-A9	*-74.3*	*0.2*	*4.0*	*0.4*	*0.0*
XRF-WP6A/1.0-1.5-A10	*-76.1*	*1.2*	*3.2*	*1.9*	*0.0*
XRF-WP6A/1.5-2.0-A10	*-83.2*	*0.9*	*1.9*	*1.6*	*0.0*
XRF-WP6B/1.0-1.5-A1	*-72.9*	*0.3*	*0.9*	*0.7*	*1.3*
XRF-WP6B/1.5-2.0-A1	*-94.6*	*3.6*	*0.0*	*4.3*	*0.0*
XRF-WP6B/1.0-1.5-A2	*-83.6*	*1.2*	*1.0*	*1.9*	*0.0*
XRF-WP6B/1.5-2.0-A2	*-95.4*	*5.7*	*1.2*	*2.2*	*0.0*
XRF-WP6B/1.0-1.5-A3	*1,484.0*	*10.8*	*30.4*	*6.9*	*0.0*
XRF-WP6B/1.5-2.0-A3	*-66.1*	*4.4*	*1.5*	*5.4*	*3.6*
XRF-WP6B/sidewall	*4,754.1*	*36.3*	*149.3*	*7.1*	*0.0*
XRF-WP6B/sidewall-A	*227.6*	*1.1*	*0.0*	*2.1*	*0.0*
XRF-WP6B/1.5-2.0/B3	*-84.9*	*4.4*	*2.4*	*-1.3*	*0.0*
XRF-WP6B/2.0-2.5/B3	*-71.2*	*1.4*	*0.8*	*-0.1*	*0.0*
		-2.4	*0.0*	*-1.3*	
XRF-MSB1A/1.0-1.5/A1	*1,028.6*	*35.5*	*370.6*	*264.0*	*2,359.7*
XRF-MSB1A/1.5-2.0/A1	*-79.4*	*-2.4*	*0.7*	*-1.3*	*0.0*
XRF-MSB1A/1.0-1.5/A2	*5,099.3*	*8.3*	*205.5*	*2.5*	*0.0*
XRF-MSB1A/1.5-2.0/A2	*608.0*	*-2.4*	*5.8*	*1.6*	*0.0*
XRF-MSB1A/1.0-1.5/A3	*-89.3*	*-1.4*	*2.8*	*0.2*	*0.0*
XRF-MSB1A/1.5-2.0/A3	*-9.9*	*-2.4*	*4.5*	*-1.3*	*0.0*
XRF-MSB1A/1.0-1.5/A4	*-7.7*	*-1.4*	*4.6*	*-0.3*	*0.0*
XRF-MSB1A/1.5-2.0/A4	*-86.4*	*-0.1*	*6.4*	*2.5*	*0.7*
XRF-MSB1A/1.0-1.5/A5	*-37.1*	*-2.4*	*4.4*	*-1.3*	*0.0*
XRF-MSB1A/1.5-2.0/A5	*-28.2*	*1.2*	*9.6*	*-1.3*	*0.0*
XRF-MSB1A/1.0-1.5/A6	*4,234.6*	*13.1*	*58.1*	*0.2*	*0.0*
XRF-MSB1A/1.5-2.0/A6	*-43.6*	*-2.4*	*0.8*	*-1.3*	*0.0*
XRF-MSB1A/1.0-1.5/A7	*1,000.1*	*-2.4*	*18.6*	*62.3*	*0.0*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-MSB1A/1.5-2.0/A7	*379.8*	*-2.4*	*14.5*	*6.0*	*0.0*
XRF-MSB1A/1.0-1.5/A8	*-101.3*	*-2.4*	*30.0*	*-1.3*	*0.0*
XRF-MSB1A/1.5-2.0/A8	*-72.1*	*-2.4*	*25.7*	*5.0*	*1.0*
XRF-MSB1A/1.0-1.5/A9	*5,581.0*	*8.3*	*152.4*	*5.2*	*0.0*
XRF-MSB1A/1.5-2.0/A9	*-73.5*	*-2.4*	*50.9*	*1.9*	*0.7*
XRF-MSB1A/1.0-1.5/A10	*-95.6*	*-2.4*	*49.0*	*-1.3*	*0.7*
XRF-MSB1A/1.5-2.0/A10	*267.4*	*-2.4*	*28.1*	*13.4*	*0.0*
XRF-MSB1A/Sidewall A	*6,866.7*	*29.5*	*130.8*	*15.5*	*7.9*
XRF-MSB1A/Sidewall B	*3,540.0*	*8.1*	*166.0*	*16.4*	*1.7*
XRF-MSB1A/Sidewall C	*15,194.6*	*37.3*	*301.0*	*58.6*	*0.0*
XRF-MSB1A/Sidewall D	*1,241.3*	*22.5*	*45.4*	*127.5*	*0.0*
XRF-MSB1A/Sidewall E	*39,709.3*	*98.0*	*905.6*	*451.6*	*0.0*
XRF-MSB1A/Sidewall F	*7,689.1*	*-2.4*	*19.2*	*40.1*	*0.0*
XRF-MSB1A/Sidewall G	*460.8*	*30.5*	*4.2*	*359.1*	*0.0*
XRF-MSB1A/Sidewall H	*1,084.6*	*-0.1*	*37.0*	*1.8*	*0.0*
XRF-MSB1A/Sidewall I	*4,600.0*	*31.0*	*5.4*	*1.8*	*0.0*
XRF-MSB1A/Sidewall J	*-80.4*	*-2.4*	*2.8*	*-1.3*	*0.0*
XRF-MSB1A/Sidewall K	*952.6*	*-0.1*	*13.1*	*-1.3*	*0.0*
XRF-MSB1A/Sidewall L	*1,278.1*	*6.3*	*29.2*	*16.0*	*0.0*
XRF-MSB1A/Sidewall M	*72.3*	*0.5*	*12.6*	*10.2*	*0.0*
XRF-MSB1A/2.0-2.5/B1	*-103.0*	*-2.4*	*4.5*	*-1.3*	*0.0*
XRF-MSB1A/2.5-3.0/B1	*24.8*	*-2.4*	*8.7*	*-1.3*	*0.0*
XRF-MSB1A/2.0-2.5/B2	*-93.4*	*-2.4*	*4.9*	*-1.3*	*5.7*
XRF-MSB1A/2.5-3.0/B2	*-48.0*	*-2.4*	*5.4*	*-1.3*	*5.6*
XRF-MSB1A/2.0-2.5/B6	*-42.3*	*-2.4*	*5.7*	*-1.3*	*0.0*
XRF-MSB1A/2.5-3.0/B6	*-61.9*	*-2.4*	*5.2*	*-1.3*	*0.0*
XRF-MSB1A/2.0-2.5/B7	*-104.5*	*-2.4*	*4.4*	*1.7*	*0.0*
XRF-MSB1A/2.5-3.0/B7	*-105.3*	*-2.4*	*4.4*	*-1.3*	*0.0*
XRF-MSB1A/2.0-2.5/B9	*-64.5*	*-2.4*	*6.0*	*-1.3*	*0.0*
XRF-MSB1A/2.5-3.0/B9	*327.7*	*-2.4*	*15.5*	*1.8*	*0.0*
XRF-MSB1A/Sidewall-A1	*1,353.6*	*-2.4*	*25.8*	*-1.3*	*8.6*
XRF-MSB1A/Sidewall-B1	*21,475.3*	*72.2*	*594.3*	*77.6*	*8.4*
XRF-MSB1A/Sidewall-C1	*22,130.7*	*40.8*	*575.6*	*109.3*	*8.1*
XRF-MSB1A/Sidewall-D1	*10,908.3*	*16.8*	*180.1*	*52.4*	*10.6*
XRF-MSB1A/Sidewall-E1	*1,420.0*	*1.9*	*71.2*	*59.7*	*7.7*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-MSB1A/Sidewall-F1	*202.5*	*-2.4*	*5.7*	*-1.3*	*5.1*
XRF-MSB1A/Sidewall-G1	*1,022.1*	*-2.4*	*52.4*	*13.7*	*7.3*
XRF-MSB1A/Sidewall-H1	*49,293.0*	*367.1*	*1,198.6*	*34.0*	*7.0*
XRF-MSB1A/Sidewall-I1	*27,569.1*	*161.9*	*319.8*	*12.8*	*17.6*
XRF-MSB1A/Sidewall-K1	*2,062.9*	*16.7*	*41.7*	*-1.3*	*0.0*
XRF-MSB1A/Sidewall-L1	*85.6*	*1.6*	*16.8*	*-1.3*	*0.0*
XRF-MSB1A/Sidewall-M1	*200.9*	*-2.4*	*13.2*	*-1.3*	*0.0*
XRF-MSB1A/4.0-4.5/C9	*-94.4*	*-0.4*	*60.6*	*59.8*	*7.7*
XRF-MSB1A/4.5-5.0/C9	*-97.3*	*-2.4*	*5.4*	*-1.3*	*5.4*
XRF-MSB1A/Sidewall-A2	*-97.4*	*-2.4*	*2.8*	*-1.3*	*6.4*
XRF-MSB1A/Sidewall-B2	*2,014.1*	*-2.4*	*72.9*	*-1.3*	*9.1*
XRF-MSB1A/Sidewall-C2	*15.9*	*-2.4*	*8.7*	*-1.3*	*5.7*
XRF-MSB1A/Sidewall-D2	*23,176.3*	*73.0*	*636.1*	*206.2*	*23.0*
XRF-MSB1A/Sidewall-E2	*673.9*	*-2.4*	*19.7*	*-1.3*	*6.3*
XRF-MSB1A/Sidewall-G2	*2,367.6*	*-2.4*	*78.7*	*-1.3*	*9.3*
XRF-MSB1A/Sidewall-H2	*69,835.4*	*212.5*	*1,235.8*	*75.2*	*0.0*
XRF-MSB1A/Sidewall-I2	*7,304.0*	*54.7*	*41.3*	*-1.3*	*13.7*
XRF-MSB1A/Sidewall-K2	*584.3*	*-2.4*	*15.0*	*-1.3*	*7.1*
XRF-MSB1A/Sidewall-L2	*115.2*	*-2.4*	*10.1*	*-1.3*	*6.0*
XRF-MSB1A/Sidewall-M2	*-34.4*	*-2.4*	*5.6*	*-1.3*	*5.9*
XRF-MSB1A/Sidewall-B3	*9,531.3*	*38.7*	*294.1*	*321.6*	*11.1*
XRF-MSB1A/Sidewall-G3	*1,252.1*	*-0.3*	*14.0*	*-1.3*	*4.7*
XRF-MSB1A/5.0-5.5/D9	*-99.7*	*-2.4*	*4.6*	*-1.3*	*5.3*
XRF-MSB1A/5.5-6.0/D9	*-100.4*	*-2.4*	*4.5*	*-1.3*	*5.3*
XRF-MSB1AX/1.0-1.5/A1	*3.8*	*-2.4*	*5.8*	*-1.3*	*6.4*
XRF-MSB1AX/1.5-2.0/A1	*3.5*	*-2.4*	*6.8*	*-1.3*	*5.4*
XRF-MSB1AX/1.0-1.5/A2	*-44.6*	*-2.4*	*4.1*	*1.2*	*5.7*
XRF-MSB1AX/1.5-2.0/A2	*348.6*	*-2.4*	*15.8*	*-1.3*	*5.9*
XRF-MSB1AX/1.0-1.5/A3	*168.2*	*-2.4*	*9.6*	*-1.3*	*5.7*
XRF-MSB1AX/1.5-2.0/A3	*-83.2*	*-2.4*	*5.9*	*-1.3*	*4.3*
XRF-MSB1AX/4.0-4.5/A4	*-92.9*	*-2.4*	*5.2*	*-1.3*	*5.6*
XRF-MSB1AX/4.5-5.0/A4	*195.5*	*-2.4*	*9.2*	*-1.3*	*5.9*
XRF-MSB1AX/3.0-3.5/A5	*-90.1*	*-2.4*	*5.1*	*-1.3*	*4.9*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-MSB1AX/3.5-4.0/A5	-90.6	-2.4	4.6	-1.3	5.4
XRF-MSB1AX/Sidewall-A	-86.2	-2.4	4.0	-1.3	6.3
XRF-MSB1AX/Sidewall-B	38.8	-2.4	4.9	-1.3	6.4
XRF-MSB1AX/Sidewall-C	-60.9	-2.4	4.7	-1.3	5.1
XRF-MSB1AX/Sidewall-D	99.6	-2.4	7.8	-1.3	5.7
XRF-MSB1AX/Sidewall-E	58.5	-2.4	4.1	4.4	6.6
XRF-MSB1AX/Sidewall-F	-91.0	-2.4	3.2	-1.3	5.9
XRF-MSB1AX/Sidewall-G	54.5	-2.4	6.6	-1.3	5.4
XRF-MSB1AX/Sidewall-H	1,102.8	-2.4	42.1	42.8	6.9
XRF-MSB1AX/Sidewall-I	12,102.1	101.1	188.3	929.2	18.4
XRF-MSB1AX/Sidewall-J	1,234.0	14.4	9.8	-1.3	7.7
XRF-MSB1AX/Sidewall-K	373.5	-2.4	14.6	-1.3	5.4
XRF-MSB1AX/Sidewall-L	77.4	-2.4	8.8	-1.3	4.3
XRF-MSB1AX/Sidewall-M	730.8	-2.4	20.6	-1.3	6.1
XRF-MSB1AX/Sidewall-N	735.6	-2.4	13.7	-1.3	6.6
XRF-MSB1AX/Sidewall-O	-93.7	-2.4	4.3	-1.3	5.9
XRF-MSB1AX/Sidewall-P	2,804.6	1.1	64.8	-1.3	7.9
XRF-MSB1B/2.5-3.0/A1	45.6	-2.4	6.1	-1.3	0.0
XRF-MSB1B/3.0-3.5/A1	297.7	-2.4	7.1	-1.3	0.0
XRF-MSB1B/2.5-3.0/A2	458.7	-2.4	7.6	-1.3	0.0
XRF-MSB1B/3.0-3.5/A2	-55.6	-2.4	4.9	-1.3	0.4
XRF-MSB1B/2.5-3.0/A3	286.7	-2.4	2.9	-1.3	0.3
XRF-MSB1B/3.0-3.5/A3	-3.3	-2.4	4.2	-1.3	0.0
XRF-MSB1B/Sidewall A	-14.2	-2.4	3.0	-1.3	5.3
XRF-MSB1B/Sidewall B	-100.8	-2.4	4.6	2.4	0.0
XRF-MSB1B/Sidewall C	346.3	-0.3	9.9	11.9	0.0
XRF-MSB1B/Sidewall D	169.0	2.2	4.2	-1.3	0.6
XRF-MSB1B/Sidewall E	-103.4	-2.4	4.4	-1.3	0.4
XRF-MSB1B/3.5-4.0/B1	-101.7	-2.4	4.6	-1.3	4.6
XRF-MSB1B/4.0-4.5/B1	-84.0	-2.4	4.6	-1.3	5.4
XRF-MSB1B/Sidewall-C1	-99.7	-2.4	5.5	-1.3	4.9

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-MSB2A/1.0-1.5/A1	*657.6*	*16.2*	*0.0*	*-1.3*	*0.0*
XRF-MSB2A/1.5-2.0/A1	*-91.7*	*-0.1*	*4.1*	*-1.3*	*0.0*
XRF-MSB2A/1.0-1.5/A2	*-42.8*	*-2.4*	*7.0*	*-1.3*	*0.0*
XRF-MSB2A/1.5-2.0/A2	*73.4*	*-2.4*	*8.7*	*-1.3*	*0.0*
XRF-MSB2A/1.0-1.5/A3	*1,313.6*	*1.1*	*19.7*	*-1.3*	*0.0*
XRF-MSB2A/1.5-2.0/A3	*3.4*	*-2.4*	*6.9*	*-1.3*	*0.0*
XRF-MSB2A/1.0-1.5/A4	*1,037.3*	*10.6*	*19.2*	*76.8*	*0.0*
XRF-MSB2A/1.5-2.0/A4	*-94.4*	*-2.4*	*5.7*	*-1.3*	*0.0*
XRF-MSB2A/1.0-1.5/A5	*-102.3*	*-0.7*	*5.2*	*58.9*	*0.0*
XRF-MSB2A/1.5-2.0/A5	*-59.1*	*-2.4*	*5.3*	*17.8*	*0.0*
XRF-MSB2A/1.0-1.5/A6	*5.8*	*-2.4*	*4.9*	*3.7*	*0.0*
XRF-MSB2A/1.5-2.0/A6	*37.6*	*-0.5*	*8.7*	*17.8*	*0.0*
XRF-MSB2A/1.0-1.5/A7	*2,972.1*	*11.1*	*54.8*	*17.0*	*0.0*
XRF-MSB2A/1.5-2.0/A7	*7.8*	*1.4*	*4.8*	*-1.3*	*0.0*
XRF-MSB2A/1.0-1.5/A8	*-63.5*	*-0.4*	*6.0*	*1.7*	*0.0*
XRF-MSB2A/1.5-2.0/A8	*-13.4*	*-2.4*	*10.1*	*1.5*	*0.0*
XRF-MSB2A/1.0-1.5/A9	*-67.2*	*-2.4*	*4.1*	*-1.3*	*6.1*
XRF-MSB2A/1.5-2.0/A9	*-98.2*	*-2.4*	*4.3*	*-1.3*	*5.6*
XRF-MSB2A/1.0-1.5/A10	*-83.4*	*-2.4*	*4.6*	*-1.3*	*6.4*
XRF-MSB2A/1.5-2.0/A10	*310.4*	*-2.4*	*10.9*	*-1.3*	*6.3*
XRF-MSB2A/Sidewall-A	*1,082.9*	*-0.3*	*27.6*	*-1.3*	*0.0*
XRF-MSB2A/Sidewall-B	*2,912.9*	*5.0*	*65.9*	*7.9*	*0.0*
XRF-MSB2A/Sidewall-C	*1,011.7*	*6.1*	*2.8*	*2.4*	*0.0*
XRF-MSB2A/Sidewall-D	*-104.1*	*12.4*	*6.8*	*185.8*	*1.6*
XRF-MSB2A/Sidewall-E	*5,150.4*	*45.7*	*149.1*	*50.5*	*0.0*
XRF-MSB2A/Sidewall-F	*-28.6*	*-2.4*	*8.8*	*-1.3*	*6.6*
XRF-MSB2A/Sidewall-G	*11,903.9*	*-2.4*	*52.3*	*21.3*	*8.6*
XRF-MSB2A/Sidewall-H	*-91.7*	*-2.4*	*4.0*	*-1.3*	*6.1*
XRF-MSB2A/Sidewall-I	*271.4*	*-2.4*	*19.4*	*-1.3*	*7.1*
XRF-MSB2A/Sidewall-J	*87.6*	*-2.4*	*3.9*	*-1.3*	*6.7*
XRF-MSB2A/Sidewall-K	*298.1*	*-2.4*	*34.4*	*12.5*	*6.6*
XRF-MSB2A/Sidewall-L	*2,058.9*	*-2.4*	*8.8*	*9.4*	*7.1*
XRF-MSB2A/Sidewall-M	*912.3*	*-2.4*	*29.3*	*-1.3*	*5.9*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-MSB2A/2.0-2.5/C1	*-99.2*	*-2.4*	*2.9*	*-1.3*	*7.4*
XRF-MSB2A/2.5-3.0/C1	*-100.8*	*-2.4*	*2.2*	*-1.3*	*6.1*
XRF-MSB2A/2.0-2.5/A3	*-95.2*	*-2.4*	*5.5*	*-1.3*	*5.9*
XRF-MSB2A/2.5-3.0/A3	*-93.3*	*-2.4*	*4.4*	*-1.3*	*6.0*
XRF-MSB2A/2.0-2.5/B4	*-33.8*	*-2.4*	*4.5*	*-0.1*	*5.7*
XRF-MSB2A/2.5-3.0/B4	*-93.8*	*-2.4*	*6.5*	*-1.3*	*5.6*
XRF-MSB2A/2.0-2.5/B7	*-86.1*	*-2.4*	*5.4*	*-1.3*	*6.1*
XRF-MSB2A/2.5-3.0/B7	*-95.2*	*-2.4*	*4.9*	*-1.3*	*6.0*
XRF-MSB2A/Sidewall-B2	*17,601.1*	*44.0*	*285.0*	*11.2*	*5.3*
XRF-MSB2A/Sidewall-D2	*91.0*	*4.3*	*16.8*	*69.2*	*7.0*
XRF-MSB2A/Sidewall-E2	*593.7*	*0.0*	*58.1*	*1.7*	*5.4*
XRF-MSB2A/Sidewall-G2	*-95.2*	*-2.4*	*2.7*	*-1.3*	*6.0*
XRF-MSB2A/Sidewall-I2	*450.3*	*-2.4*	*24.0*	*22.5*	*7.3*
XRF-MSB2A/Sidewall-K2	*2,687.0*	*0.3*	*61.6*	*2.2*	*5.0*
XRF-MSB2A/Sidewall-L2	*8,262.4*	*22.7*	*312.5*	*-1.3*	*20.1*
XRF-MSB2A/Sidewall-M2	*2,493.3*	*13.6*	*57.5*	*-1.3*	*6.3*
XRF-MSB2A/Sidewall-B3	*890.9*	*-2.4*	*2.4*	*-1.3*	*7.3*
XRF-MSB2B/6.0-6.5/A1	*-99.7*	*-2.4*	*5.2*	*-1.3*	*5.7*
XRF-MSB2B/6.5-7.0/A1	*-96.8*	*-2.4*	*4.7*	*-1.3*	*5.9*
XRF-MSB2B/6.0-6.5/A2	*-96.0*	*-2.4*	*4.5*	*-1.3*	*6.7*
XRF-MSB2B/6.5-7.0/A2	*-99.0*	*-2.4*	*4.9*	*-1.3*	*5.9*
XRF-MSB2B/6.0-6.5/A3	*-98.6*	*-2.4*	*5.0*	*-1.3*	*6.0*
XRF-MSB2B/6.5-7.0/A3	*-95.2*	*-2.4*	*5.1*	*-1.3*	*5.4*
XRF-MSB2B/Sidewall-A	*-96.1*	*-2.4*	*4.4*	*1.2*	*5.0*
XRF-MSB2B/Sidewall-B	*-93.3*	*-2.4*	*5.2*	*-1.3*	*6.0*
XRF-MSB2B/Sidewall-C	*-32.6*	*-2.4*	*6.9*	*-1.3*	*5.1*
XRF-MSB2B/Sidewall-D	*-68.8*	*-2.4*	*4.9*	*-1.3*	*5.7*
XRF-MSB2B/Sidewall-E	*-73.1*	*-2.4*	*4.8*	*-1.3*	*5.0*
XRF-MSB2B/Sidewall-F	*-100.1*	*-2.4*	*10.2*	*-1.3*	*6.0*
XRF-MSB2B/Sidewall-G	*-93.8*	*-2.4*	*4.4*	*-1.3*	*5.4*
XRF-MSB2B/Sidewall-H	*-98.2*	*-2.4*	*4.5*	*-1.3*	*5.9*
XRF-MSB2B/Sidewall-F2	*-100.0*	*-0.4*	*4.5*	*-1.3*	*5.1*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 2 - CONFIRMATORY SAMPLE RESULTS (XRF Raw)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
				-1.3	
XRF-Lagoon/1.0-1.5/A1	-104.5	-2.4	4.4	-1.3	0.0
XRF-Lagoon/1.5-2.0/A1	-103.9	-0.3	4.6	-1.3	0.0
XRF-Lagoon/1.0-1.5/A2	-103.4	-0.1	4.5	-1.3	0.0
XRF-Lagoon/1.5-2.0/A2	-99.4	-0.3	4.6	-1.3	0.0
XRF-Lagoon/1.0-1.5/A3	-95.7	-2.4	4.5	-1.3	6.4
XRF-Lagoon/1.5-2.0/A3	-90.2	-2.4	4.7	-1.3	6.3
XRF-Lagoon/1.0-1.5/A4	-94.8	-2.4	4.7	-1.3	6.3
XRF-Lagoon/1.5-2.0/A4	-96.4	-2.4	4.7	-1.3	5.4
XRF-Lagoon/1.0-1.5/A5	-84.1	-2.4	6.7	-1.3	6.6
XRF-Lagoon/1.5-2.0/A5	-96.9	-2.4	4.8	-1.3	5.3
XRF-Lagoon/Sidewall-A	1,091.9	-2.4	44.2	-1.3	0.0
XRF-Lagoon/Sidewall-B	-95.0	-2.4	5.4	-1.3	0.0
XRF-Lagoon/Sidewall-C	-31.7	-2.4	7.4	-1.3	0.0
XRF-Lagoon/Sidewall-D	2.0	-2.4	6.3	-1.3	0.0
XRF-Lagoon/Sidewall-E	-86.1	-2.4	6.6	-1.3	0.0
XRF-Lagoon/Sidewall-F	10.0	-2.4	4.7	-1.3	0.0
XRF-Lagoon/Sidewall-G	399.2	-2.4	7.5	-1.3	0.0
XRF-Lagoon/Sidewall-H	-92.8	-2.4	5.2	-1.3	0.0
XRF-Lagoon/Sidewall-I	-96.8	-2.4	5.4	-1.3	0.0
XRF-Lagoon/Sidewall-J	-89.7	-2.4	6.9	-1.3	0.0
XRF-Lagoon/Sidewall-K	-96.1	-2.4	6.8	-1.3	0.0
XRF-Lagoon/Sidewall-L	-98.4	-2.4	4.9	-1.3	0.0
XRF-Lagoon/Sidewall-M	-55.6	-2.4	4.9	-1.3	0.0
XRF-Lagoon/Sidewall-N	-93.7	-2.4	4.7	-1.3	0.0
XRF-Lagoon/Sidewall-O	-106.3	-2.4	3.9	-1.3	0.0
XRF-Lagoon/Sidewall-P	-60.9	-0.6	5.5	-1.3	0.0
XRF-Lagoon/Sidewall-Q	-87.0	0.6	4.1	-1.3	0.0
XRF-Lagoon/Sidewall-R	3,121.9	15.4	8.2	-1.3	0.0

Confirmatory Sample Results (Corrected XRF Analysis)

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-WP1A/2.5-3.0/A1	*2,112.1*	*0.2*	*65.0*	*1.6*	*8.3*
XRF-WP1A/3.0-3.5/A1	*-73.5*	*-2.4*	*3.1*	*-1.3*	*6.1*
XRF-WP1A/2.5-3.0/A2	*66.9*	*-2.4*	*9.2*	*-1.3*	*5.0*
XRF-WP1A/3.0-3.5/A2	*-60.9*	*-2.4*	*7.7*	*-1.3*	*5.9*
XRF-WP1A/2.5-3.0/A3	*-19.8*	*-2.4*	*3.3*	*-1.3*	*7.6*
XRF-WP1A/3.0-3.5/A3	*-50.7*	*-2.4*	*8.5*	*-1.3*	*7.4*
XRF-WP1A/2.5-3.0/A4	*-80.9*	*-2.4*	*6.2*	*-1.3*	*5.9*
XRF-WP1A/3.0-3.5/A4	*-90.2*	*-2.4*	*6.5*	*1.2*	*4.7*
XRF-WP1A/Sidewall-A	*138.2*	*-2.4*	*3.3*	*-1.3*	*5.7*
XRF-WP1A/Sidewall-B	*1,322.3*	*8.3*	*10.4*	*-1.3*	*6.9*
XRF-WP1A/Sidewall-C	*11,547.6*	*39.6*	*243.0*	*5.9*	*14.4*
XRF-WP1A/Sidewall-D	*73,239.1*	*304.2*	*1,089.6*	*77.1*	*0.0*
XRF-WP1A/Sidewall-E	*31,090.9*	*110.6*	*311.5*	*29.8*	*10.6*
XRF-WP1A/3.5-4.0/B1	*-95.0*	*-2.4*	*5.0*	*-1.3*	*5.0*
XRF-WP1A/4.0-4.5/B1	*-92.9*	*-2.4*	*4.5*	*-1.3*	*5.1*
XRF-WP1A/Sidewall-B2	*1,106.7*	*0.7*	*28.0*	*-1.3*	*6.6*
XRF-WP1A/Sidewall-C2	*91.4*	*-2.4*	*5.8*	*-1.3*	*10.1*
XRF-WP1A/Sidewall-D2	*82.1*	*-2.4*	*6.3*	*-1.3*	*5.1*
XRF-WP1A/Sidewall-E2	*16.1*	*-2.4*	*7.0*	*-1.3*	*5.9*
XRF-WP1B/1.0-1.5/A1	*-26.2*	*-2.4*	*3.7*	*-1.3*	*6.4*
XRF-WP1B/1.5-2.0/A1	*100,000.0*	*519.0*	*5,923.0*	*302.5*	*0.0*
XRF-WP1B/1.0-1.5/A2	*823.1*	*-2.4*	*5.5*	*-1.3*	*7.3*
XRF-WP1B/1.5-2.0/A2	*-90.4*	*-2.4*	*7.4*	*-1.3*	*6.7*
XRF-WP1B/1.0-1.5/A3	*394.8*	*-2.4*	*14.1*	*-1.3*	*5.4*
XRF-WP1B/1.5-2.0/A3	*-37.0*	*-2.4*	*7.5*	*-1.3*	*5.0*
XRF-WP1B/Sidewall-A	*58,562.3*	*125.4*	*1,413.2*	*74.6*	*6.6*
XRF-WP1B/Sidewall-B	*3,252.1*	*0.2*	*134.4*	*-1.3*	*7.9*
XRF-WP1B/2.0-2.5/B1	*-94.2*	*-2.4*	*5.1*	*-1.3*	*6.0*
XRF-WP1B/2.5-3.0/B1	*-98.4*	*-2.4*	*4.7*	*-1.3*	*5.3*
XRF-WP1B/Sidewall-A2	*4,519.4*	*26.8*	*9.4*	*-1.3*	*6.9*
XRF-WP1B/Sidewall-B2	*-88.1*	*-2.4*	*3.5*	*-1.3*	*5.7*
XRF-WP1B/Sidewall-A3	*-36.0*	*-2.4*	*3.8*	*-1.3*	*7.3*
XRF-WP1C/1.3-1.8/A1	*-91.0*	*-2.4*	*7.9*	*1.8*	*5.3*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-WP1C/1.8-2.3/A1	493.1	-2.4	2.5	-1.3	5.7
XRF-WP1C/1.3-1.8/A2	NT	NT	NT	NT	NT
XRF-WP1C/1.8-2.3/A2	NT	NT	NT	NT	NT
XRF-WP1C/1.3-1.8/A3	NT	NT	NT	NT	NT
XRF-WP1C/1.8-2.3/A3	NT	NT	NT	NT	NT
XRF-WP1D/3.3-3.8/A1	-75.6	2.8	6.5	2.2	0.0
XRF-WP1D/3.8-4.3/A1	283.9	-2.4	8.8	-1.3	0.0
XRF-WP1D/3.3-3.8/A2	-63.2	1.6	6.1	-1.3	0.0
XRF-WP1D/3.8-4.3/A2	-63.1	0.5	3.9	0.1	0.0
XRF-WP1D/3.3-3.8/A3	722.7	0.3	17.3	0.4	0.0
XRF-WP1D/3.8-4.3/A3	172.2	5.2	12.1	3.0	0.0
XRF-WP1D-Sidewall-A	180.4	10.8	3.7	2.9	0.0
XRF-WP1D-Sidewall-B	1,777.3	1.8	15.7	-1.3	0.0
XRF-WP1D/Sidewall-B2	3,232.7	21.1	13.5	1.4	5.3
XRF-WP1DX/3.0-3.5/A1	-56.5	-2.4	5.5	-1.3	6.4
XRF-WP1DX/3.5-4.0/A1	-90.8	-2.4	4.8	-1.3	6.3
XRF-WP1DX/3.0-3.5/A2	-88.1	-2.4	7.5	-1.3	4.3
XRF-WP1DX/3.5-4.0/A2	-92.0	-2.4	4.2	-1.3	5.9
XRF-WP1DX/2.0-2.5/A3	-38.7	-2.4	7.0	-1.3	5.9
XRF-WP1DX/2.5-3.0/A3	-92.4	-2.4	6.2	-1.3	6.1
XRF-WP1DX/3.0-3.5/A4	-78.8	-2.4	4.6	-1.3	6.3
XRF-WP1DX/3.5-4.0/A4	-86.1	-2.4	4.1	-1.3	6.0
XRF-WP1DX/3.0-3.5/A5	-90.4	-2.4	5.4	-1.3	5.4
XRF-WP1DX/3.5-4.0/A5	-95.0	-2.4	4.9	-1.3	5.7
XRF-WP1DX/Sidewall-A	540.3	-2.4	22.1	-1.3	5.4
XRF-WP1DX/Sidewall-B	-76.4	-2.4	4.7	6.7	4.7
XRF-WP1DX/Sidewall-C	476.0	-2.4	13.8	-1.3	7.0
XRF-WP1DX/Sidewall-D	-60.0	-2.4	5.6	-1.3	6.0
XRF-WP1DX/Sidewall-E	3,779.0	3.2	17.3	3.3	10.7
XRF-WP1DX/Sidewall-F	1,099.2	-2.4	11.4	-1.3	6.9
XRF-WP1DX/Sidewall-G	168.1	-2.4	8.5	-1.3	6.1
XRF-WP1DX/Sidewall-H	4,549.6	0.8	103.8	8.4	8.9
XRF-WP1DX/Sidewall-I	14,920.7	8.1	271.1	2.2	5.0
XRF-WP1DX/Sidewall-J	234.8	-2.4	5.8	-1.3	6.6
XRF-WP1DX/Sidewall-K	23,572.4	45.4	92.0	17.2	8.7
XRF-WP1DX/Sidewall-L	1,103.5	1.3	38.8	14.9	8.0

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-WP1DX/Sidewall-M	5,573.9	22.9	9.9	-1.3	9.0
XRF-WP1DX/Sidewall-N	-37.4	-2.4	4.9	-1.3	5.7
XRF-WP1DX/Sidewall-H2	-92.9	-2.4	4.8	-1.3	5.1
XRF-WP1DX/Sidewall-I2	-87.7	-2.4	5.1	-1.3	5.7
XRF-WP1DX/Sidewall-K2	-91.7	-2.4	4.5	-1.3	4.1
XRF-WP1DX/Sidewall-L2	-42.2	-2.4	6.0	-1.3	5.7
XRF-WP1DX/Sidewall-M2	-92.5	-2.4	5.2	-1.3	6.1
XRF-WP2A/7.3-7.8/A1	85.4	-2.4	10.5	-1.3	6.7
XRF-WP2A/7.8-8.3/A1	488.1	-2.4	11.1	-1.3	5.4
XRF-WP2A/7.3-7.8/A2	-90.2	-2.4	4.6	-1.3	5.9
XRF-WP2A/7.8-8.3/A2	367.9	-2.4	4.8	-1.3	6.3
XRF-WP2A/7.3-7.8/A3	408.6	-2.4	13.3	-1.3	4.9
XRF-WP2A/7.8-8.3/A3	-92.1	-2.4	5.1	-1.3	5.7
XRF-WP2A/Sidewall-A	422.4	-2.4	13.9	-1.3	5.9
XRF-WP2A/Sidewall-B	163.7	-2.4	9.5	-1.3	6.0
XRF-WP2A/Sidewall-C	1,115.1	-1.4	31.4	2.4	8.0
XRF-WP2A/Sidewall-D	12,504.4	59.8	533.8	65.6	11.6
XRF-WP2A/Sidewall-E	1,101.0	0.0	17.4	-1.3	4.6
XRF-WP2A/Sidewall-F	2,627.6	6.8	88.2	-1.3	4.6
XRF-WP2A/Sidewall-G	-64.4	-2.4	5.5	-1.3	4.7
XRF-WP2A/Sidewall-H	37.4	-2.4	7.2	-1.3	5.1
XRF-WP2A/Sidewall-I	-94.2	-2.4	6.1	-1.3	5.3
XRF-WP2B/2.5-3.0/A1	5,638.4	11.7	10.5	2.2	13.3
XRF-WP2B/3.0-3.5/A1	-92.9	-2.4	5.3	-1.3	4.0
XRF-WP2B/2.5-3.0/A2	-94.4	-2.4	6.9	-1.3	5.3
XRF-WP2B/3.0-3.5/A2	-97.8	-2.4	6.3	-1.3	5.3
XRF-WP2B/2.5-3.0/A3	-92.8	-2.4	5.0	-1.3	5.9
XRF-WP2B/3.0-3.5/A3	32.1	-2.4	8.4	-1.3	5.7
XRF-WP2B/2.5-3.0/A4	-92.1	-2.4	5.9	-1.3	5.7
XRF-WP2B/3.0-3.5/A4	-92.0	-2.4	6.7	-1.3	5.3
XRF-WP2B/2.5-3.0/A5	-77.9	-2.4	5.8	-1.3	5.0
XRF-WP2B/3.0-3.5/A5	-90.6	-2.4	6.3	-1.3	5.6
XRF-WP2B/Sidewall-A	60,451.3	185.9	1,566.3	108.8	11.7
XRF-WP2B/Sidewall-B	7,101.3	16.6	143.7	28.3	7.4
XRF-WP2B/Sidewall-C	1,796.0	-2.4	12.1	2.2	9.1
XRF-WP2B/Sidewall-D	20,262.7	102.7	228.6	128.6	5.9

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-WP2B/Sidewall-E	91.2	-2.4	625.6	-1.3	5.6
XRF-WP2B/4.5-5.0/B1	-85.3	-2.4	4.6	-1.3	7.1
XRF-WP2B/5.0-5.5/B1	-89.8	-2.4	5.2	-1.3	5.6
XRF-WP2B/sidewall-A2	3,442.6	3.3	135.7	-1.3	9.4
XRF-WP2B/sidewall-B2	4,929.4	13.5	87.9	-1.3	7.9
XRF-WP2B/sidewall-C2	-30.7	-2.4	6.9	-1.3	5.6
XRF-WP2B/sidewall-D2	2,258.0	4.6	70.1	-1.3	7.9
XRF-WP2B/sidewall-E2	19,089.0	69.6	381.9	14.0	9.3
XRF-WP2C/1.0-1.5/A1	-91.6	-2.4	5.5	41.0	6.3
XRF-WP2C/1.5-2.0/A1	-93.8	-2.4	5.2	20.6	4.7
XRF-WP2C/1.0-1.5/A2	-97.3	-2.4	4.8	-1.3	5.1
XRF-WP2C/1.5-2.0/A2	110.0	-2.4	8.6	-1.3	6.0
XRF-WP2C/1.0-1.5/A3	-77.7	-2.4	6.3	-1.3	6.3
XRF-WP2C/1.5-2.0/A3	-95.0	-2.4	5.1	-1.3	4.7
XRF-WP2C/Sidewall-A	14,306.3	22.8	337.3	-1.3	8.0
XRF-WP2C/Sidewall-B	5,040.9	19.8	104.1	-1.3	7.0
XRF-WP2C/Sidewall-C	937.5	-2.4	8.8	-1.3	6.6
XRF-WP2C/Sidewall-D	1,132.9	-2.4	36.0	-1.3	7.7
XRF-WP2C/Sidewall-A2	1,292.4	-2.4	45.8	-1.3	6.0
XRF-WP2C/Sidewall-C2	2,820.6	5.3	30.4	-1.3	7.4
XRF-WP2C/Sidewall-D2	643.9	-2.4	26.7	-1.3	5.6
XRF-WP3A/1.3-1.8/A1	8,768.4	48.8	18.5	17.5	9.4
XRF-WP3A/1.8-2.3/A1	1,724.6	12.4	13.5	10.2	1.3
XRF-WP3A/1.3-1.8/A2	682.2	10.0	13.8	6.9	0.0
XRF-WP3A/1.8-2.3/A2	1,293.0	-1.4	37.7	-1.3	1.3
XRF-WP3A/1.3-1.8/A3	5,774.0	28.5	186.9	24.5	1.7
XRF-WP3A/1.8-2.3/A3	19.5	9.3	14.1	9.0	0.0
XRF-WP3A/sidewall-A	20,114.3	48.9	356.7	51.5	0.0
XRF-WP3A/sidewall-B	5,218.6	24.4	151.5	76.4	3.9
XRF-WP3A/sidewall-C	1,484.3	4.0	63.4	6.1	0.0
XRF-WP3A/2.0-2.5/B1	287.9	8.4	4.9	5.5	1.0
XRF-WP3A/2.5-3.0/B1	-68.0	4.8	2.4	4.5	0.0
XRF-WP3A/2.0-2.5/B2	2,161.0	8.4	68.0	5.5	0.0
XRF-WP3A/2.5-3.0/B2	23.7	1.2	5.6	2.2	1.1

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-WP3A/2.0-2.5/B3	*-59.7*	*-2.4*	*4.3*	*-1.3*	*0.0*
XRF-WP3A/2.5-3.0/B3	*-82.6*	*3.5*	*4.2*	*2.5*	*0.0*
XRF-WP3A/Sidewall-A2	*1,243.6*	*16.6*	*25.4*	*9.1*	*0.0*
XRF-WP3A/Sidewall-B2	*1,774.6*	*10.9*	*72.7*	*8.7*	*0.0*
XRF-WP3A/Sidewall-C2	*2,504.0*	*10.7*	*81.0*	*11.8*	*0.0*
XRF-WP3A/3.0-3.5/C1	*-80.9*	*-1.1*	*12.2*	*4.2*	*0.0*
XRF-WP3A/3.5-4.0/C1	*615.4*	*-2.4*	*5.3*	*-1.3*	*0.0*
XRF-WP3A/3.0-3.5/C2	*-73.7*	*-2.4*	*0.9*	*-1.3*	*0.0*
XRF-WP3A/3.5-4.0/C2	*2,343.6*	*-2.4*	*23.1*	*-1.3*	*1.1*
XRF-WP3A/3.0-3.5/C3	*1,087.1*	*-2.4*	*8.9*	*-1.3*	*0.0*
XRF-WP3A/3.5-4.0/C3	*6,643.1*	*9.9*	*40.9*	*3.7*	*4.1*
XRF-WP3A/sidewall-A3	*16,079.3*	*36.0*	*206.4*	*16.2*	*0.0*
XRF-WP3A/sidewall-B3	*5,394.6*	*7.8*	*137.2*	*10.8*	*0.0*
XRF-WP3A/sidewall-C3	*2,536.6*	*7.0*	*118.3*	*-1.3*	*3.7*
XRF-WP3A/4.0-4.5/D2	*-91.2*	*-2.4*	*5.4*	*-1.3*	*7.1*
XRF-WP3A/4.5-5.0/D2	*-93.3*	*-2.4*	*4.8*	*-1.3*	*6.0*
XRF-WP3A/4.0-4.5/D3	*-88.8*	*-2.4*	*5.3*	*-1.3*	*5.4*
XRF-WP3A/4.5-5.0/D3	*-93.3*	*-2.4*	*5.2*	*-1.3*	*5.1*
XRF-WP3A/sidewall-B4	*15,540.3*	*10.9*	*372.6*	*2.0*	*9.6*
XRF-WP3A/sidewall-C4	*258.7*	*-2.4*	*11.4*	*-1.3*	*6.7*
XRF-WP3A/Sidewall-B5	*5,929.3*	*2.2*	*168.8*	*-1.3*	*9.9*
XRF-WP3A/Sidewall-B6	*-33.8*	*-2.4*	*6.1*	*-1.3*	*5.9*
XRF-WP3B/3.3-3.8-A1	*-73.1*	*3.3*	*0.0*	*0.8*	*1.3*
XRF-WP3B/3.8-4.3-A1	*-84.0*	*5.1*	*1.4*	*5.0*	*0.0*
XRF-WP3B/3.3-3.8-A2	*-24.4*	*8.6*	*0.0*	*9.0*	*0.0*
XRF-WP3B/3.8-4.3-A2	*1,265.3*	*7.5*	*4.3*	*9.5*	*0.0*
XRF-WP3B/3.3-3.8-A3	*1,126.9*	*10.0*	*3.3*	*4.9*	*0.0*
XRF-WP3B/3.8-4.3-A3	*1,118.1*	*8.1*	*16.4*	*7.8*	*0.0*
XRF-WP3B/sidewall-A	*4,298.3*	*9.7*	*34.5*	*8.3*	*0.0*
XRF-WP3B/sidewall-B	*799.9*	*-0.4*	*10.9*	*2.1*	*0.0*
XRF-WP3B/sidewall-C	*42,757.0*	*139.2*	*818.2*	*74.2*	*5.6*
XRF-WP3B/sidewall-D	*296.8*	*24.7*	*119.8*	*129.6*	*714.7*
XRF-WP3B/Sidewall-B3	*1,628.7*	*-2.4*	*13.8*	*-1.3*	*7.0*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-WP3B/4.3-4.8/B2	2,095.1	0.5	25.0	7.0	6.3
XRF-WP3B/4.8-5.3/B2	3,025.6	4.8	72.3	28.6	0.0
XRF-WP3B/4.3-4.8/B3	-54.7	-2.4	3.3	-1.3	5.1
XRF-WP3B/4.8-5.3/B3	-12.9	-2.4	3.7	-1.3	4.0
XRF-WP3B/Sidewall-A2	981.7	-0.6	13.8	25.5	5.4
XRF-WP3B/Sidewall-C2	1,082.6	-2.4	30.4	-1.3	6.6
XRF-WP3B-5.3-5.8-C2	-96.4	-2.4	4.0	-1.3	5.7
XRF-WP3B-5.8-6.3-C2	-79.7	-2.4	4.4	-1.3	5.7
XRF-WP3B-Sidewall-B4	584.0	-2.4	11.9	-1.3	5.1
XRF-WP3B-Sidewall-C3	479.5	-2.4	9.2	-1.3	5.7
XRF-WP6A/1.0-1.5-A1	-93.1	-2.4	0.9	-1.3	0.0
XRF-WP6A/1.5-2.0-A1	-84.7	-2.4	0.0	-1.3	0.0
XRF-WP6A/1.0-1.5-A2	-100.7	-2.4	2.4	-1.3	1.9
XRF-WP6A/1.5-2.0-A2	-102.2	-2.4	2.6	-1.3	2.3
XRF-WP6A/1.0-1.5-A3	-92.9	-2.4	2.3	-1.3	2.0
XRF-WP6A/1.5-2.0-A3	-97.5	-2.4	3.6	-1.3	2.9
XRF-WP6A/1.0-1.5-A4	430.5	9.4	2.6	7.2	0.0
XRF-WP6A/1.5-2.0-A4	-11.5	6.8	3.3	4.4	0.0
XRF-WP6A/1.0-1.5-A5	-85.7	3.3	2.4	3.1	0.0
XRF-WP6A/1.5-2.0-A5	-74.4	1.6	2.1	5.4	0.0
XRF-WP6A/1.0-1.5-A6	8.7	3.0	5.1	-1.3	0.0
XRF-WP6A/1.5-2.0-A6	-62.1	2.7	2.6	0.3	0.0
XRF-WP6A/1.0-1.5-A7	-38.4	1.2	5.3	0.1	0.0
XRF-WP6A/1.5-2.0-A7	-72.8	3.4	0.8	2.2	0.0
XRF-WP6A/1.0-1.5-A8	-72.4	2.1	5.1	2.2	6.3
XRF-WP6A/1.5-2.0-A8	-43.5	7.6	4.8	3.7	0.0
XRF-WP6A/1.0-1.5-A9	81.0	4.8	15.7	4.4	1.7
XRF-WP6A/1.5-2.0-A9	-74.3	0.2	4.0	0.4	0.0
XRF-WP6A/1.0-1.5-A10	-76.1	1.2	3.2	1.9	0.0
XRF-WP6A/1.5-2.0-A10	-83.2	0.9	1.9	1.6	0.0
XRF-WP6B/1.0-1.5-A1	-72.9	0.3	0.9	0.7	1.3
XRF-WP6B/1.5-2.0-A1	-94.6	3.6	0.0	4.3	0.0
XRF-WP6B/1.0-1.5-A2	-83.6	1.2	1.0	1.9	0.0
XRF-WP6B/1.5-2.0-A2	-95.4	5.7	1.2	2.2	0.0
XRF-WP6B/1.0-1.5-A3	1,484.0	10.8	30.4	6.9	0.0
XRF-WP6B/1.5-2.0-A3	-66.1	4.4	1.5	5.4	3.6

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-WP6B/sidewall	4,754.1	36.3	149.3	7.1	0.0
XRF-WP6B/sidewall-A	227.6	1.1	0.0	2.1	0.0
XRF-WP6B/1.5-2.0/B3	-84.9	4.4	2.4	-1.3	0.0
XRF-WP6B/2.0-2.5/B3	-71.2	1.4	0.8	-0.1	0.0
		-2.4	0.0	-1.3	
XRF-MSB1A/1.0-1.5/A1	1,028.6	35.5	370.6	264.0	2,359.7
XRF-MSB1A/1.5-2.0/A1	-79.4	-2.4	0.7	-1.3	0.0
XRF-MSB1A/1.0-1.5/A2	5,099.3	8.3	205.5	2.5	0.0
XRF-MSB1A/1.5-2.0/A2	608.0	-2.4	5.8	1.6	0.0
XRF-MSB1A/1.0-1.5/A3	-89.3	-1.4	2.8	0.2	0.0
XRF-MSB1A/1.5-2.0/A3	-9.9	-2.4	4.5	-1.3	0.0
XRF-MSB1A/1.0-1.5/A4	-7.7	-1.4	4.6	-0.3	0.0
XRF-MSB1A/1.5-2.0/A4	-86.4	-0.1	6.4	2.5	0.7
XRF-MSB1A/1.0-1.5/A5	-37.1	-2.4	4.4	-1.3	0.0
XRF-MSB1A/1.5-2.0/A5	-28.2	1.2	9.6	-1.3	0.0
XRF-MSB1A/1.0-1.5/A6	4,234.6	13.1	58.1	0.2	0.0
XRF-MSB1A/1.5-2.0/A6	-43.6	-2.4	0.8	-1.3	0.0
XRF-MSB1A/1.0-1.5/A7	1,000.1	-2.4	18.6	62.3	0.0
XRF-MSB1A/1.5-2.0/A7	379.8	-2.4	14.5	6.0	0.0
XRF-MSB1A/1.0-1.5/A8	-101.3	-2.4	30.0	-1.3	0.0
XRF-MSB1A/1.5-2.0/A8	-72.1	-2.4	25.7	5.0	1.0
XRF-MSB1A/1.0-1.5/A9	5,581.0	8.3	152.4	5.2	0.0
XRF-MSB1A/1.5-2.0/A9	-73.5	-2.4	50.9	1.9	0.7
XRF-MSB1A/1.0-1.5/A10	-95.6	-2.4	49.0	-1.3	0.7

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-MSB1A/1.5-2.0/A10	267.4	-2.4	28.1	13.4	0.0
XRF-MSB1A/Sidewall A	6,866.7	29.5	130.8	15.5	7.9
XRF-MSB1A/Sidewall B	3,540.0	8.1	166.0	16.4	1.7
XRF-MSB1A/Sidewall C	15,194.6	37.3	301.0	58.6	0.0
XRF-MSB1A/Sidewall D	1,241.3	22.5	45.4	127.5	0.0
XRF-MSB1A/Sidewall E	39,709.3	98.0	905.6	451.6	0.0
XRF-MSB1A/Sidewall F	7,689.1	-2.4	19.2	40.1	0.0
XRF-MSB1A/Sidewall G	460.8	30.5	4.2	359.1	0.0
XRF-MSB1A/Sidewall H	1,084.6	-0.1	37.0	1.8	0.0
XRF-MSB1A/Sidewall I	4,600.0	31.0	5.4	1.8	0.0
XRF-MSB1A/Sidewall J	-80.4	-2.4	2.8	-1.3	0.0
XRF-MSB1A/Sidewall K	952.6	-0.1	13.1	-1.3	0.0
XRF-MSB1A/Sidewall L	1,278.1	6.3	29.2	16.0	0.0
XRF-MSB1A/Sidewall M	72.3	0.5	12.6	10.2	0.0
XRF-MSB1A/2.0-2.5/B1	-103.0	-2.4	4.5	-1.3	0.0
XRF-MSB1A/2.5-3.0/B1	24.8	-2.4	8.7	-1.3	0.0
XRF-MSB1A/2.0-2.5/B2	-93.4	-2.4	4.9	-1.3	5.7
XRF-MSB1A/2.5-3.0/B2	-48.0	-2.4	5.4	-1.3	5.6
XRF-MSB1A/2.0-2.5/B6	-42.3	-2.4	5.7	-1.3	0.0
XRF-MSB1A/2.5-3.0/B6	-61.9	-2.4	5.2	-1.3	0.0
XRF-MSB1A/2.0-2.5/B7	-104.5	-2.4	4.4	1.7	0.0
XRF-MSB1A/2.5-3.0/B7	-105.3	-2.4	4.4	-1.3	0.0
XRF-MSB1A/2.0-2.5/B9	-64.5	-2.4	6.0	-1.3	0.0
XRF-MSB1A/2.5-3.0/B9	327.7	-2.4	15.5	1.8	0.0
XRF-MSB1A/Sidewall-A1	1,353.6	-2.4	25.8	-1.3	8.6
XRF-MSB1A/Sidewall-B1	21,475.3	72.2	594.3	77.6	8.4
XRF-MSB1A/Sidewall-C1	22,130.7	40.8	575.6	109.3	8.1
XRF-MSB1A/Sidewall-D1	10,908.3	16.8	180.1	52.4	10.6
XRF-MSB1A/Sidewall-E1	1,420.0	1.9	71.2	59.7	7.7
XRF-MSB1A/Sidewall-F1	202.5	-2.4	5.7	-1.3	5.1
XRF-MSB1A/Sidewall-G1	1,022.1	-2.4	52.4	13.7	7.3
XRF-MSB1A/Sidewall-H1	49,293.0	367.1	1,198.6	34.0	7.0
XRF-MSB1A/Sidewall-I1	27,569.1	161.9	319.8	12.8	17.6
XRF-MSB1A/Sidewall-K1	2,062.9	16.7	41.7	-1.3	0.0
XRF-MSB1A/Sidewall-L1	85.6	1.6	16.8	-1.3	0.0
XRF-MSB1A/Sidewall-M1	200.9	-2.4	13.2	-1.3	0.0

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-MSB1A/4.0-4.5/C9	-94.4	-0.4	60.6	59.8	7.7
XRF-MSB1A/4.5-5.0/C9	-97.3	-2.4	5.4	-1.3	5.4
XRF-MSB1A/Sidewall-A2	-97.4	-2.4	2.8	-1.3	6.4
XRF-MSB1A/Sidewall-B2	2,014.1	-2.4	72.9	-1.3	9.1
XRF-MSB1A/Sidewall-C2	15.9	-2.4	8.7	-1.3	5.7
XRF-MSB1A/Sidewall-D2	23,176.3	73.0	636.1	206.2	23.0
XRF-MSB1A/Sidewall-E2	673.9	-2.4	19.7	-1.3	6.3
XRF-MSB1A/Sidewall-G2	2,367.6	-2.4	78.7	-1.3	9.3
XRF-MSB1A/Sidewall-H2	69,835.4	212.5	1,235.8	75.2	0.0
XRF-MSB1A/Sidewall-I2	7,304.0	54.7	41.3	-1.3	13.7
XRF-MSB1A/Sidewall-K2	584.3	-2.4	15.0	-1.3	7.1
XRF-MSB1A/Sidewall-L2	115.2	-2.4	10.1	-1.3	6.0
XRF-MSB1A/Sidewall-M2	-34.4	-2.4	5.6	-1.3	5.9
XRF-MSB1A/Sidewall-B3	9,531.3	38.7	294.1	321.6	11.1
XRF-MSB1A/Sidewall-G3	1,252.1	-0.3	14.0	-1.3	4.7
XRF-MSB1A/5.0-5.5/D9	-99.7	-2.4	4.6	-1.3	5.3
XRF-MSB1A/5.5-6.0/D9	-100.4	-2.4	4.5	-1.3	5.3
XRF-MSB1AX/1.0-1.5/A1	3.8	-2.4	5.8	-1.3	6.4
XRF-MSB1AX/1.5-2.0/A1	3.5	-2.4	6.8	-1.3	5.4
XRF-MSB1AX/1.0-1.5/A2	-44.6	-2.4	4.1	1.2	5.7
XRF-MSB1AX/1.5-2.0/A2	348.6	-2.4	15.8	-1.3	5.9
XRF-MSB1AX/1.0-1.5/A3	168.2	-2.4	9.6	-1.3	5.7
XRF-MSB1AX/1.5-2.0/A3	-83.2	-2.4	5.9	-1.3	4.3
XRF-MSB1AX/4.0-4.5/A4	-92.9	-2.4	5.2	-1.3	5.6
XRF-MSB1AX/4.5-5.0/A4	195.5	-2.4	9.2	-1.3	5.9
XRF-MSB1AX/3.0-3.5/A5	-90.1	-2.4	5.1	-1.3	4.9
XRF-MSB1AX/3.5-4.0/A5	-90.6	-2.4	4.6	-1.3	5.4
XRF-MSB1AX/Sidewall-A	-86.2	-2.4	4.0	-1.3	6.3
XRF-MSB1AX/Sidewall-B	38.8	-2.4	4.9	-1.3	6.4
XRF-MSB1AX/Sidewall-C	-60.9	-2.4	4.7	-1.3	5.1
XRF-MSB1AX/Sidewall-D	99.6	-2.4	7.8	-1.3	5.7
XRF-MSB1AX/Sidewall-E	58.5	-2.4	4.1	4.4	6.6
XRF-MSB1AX/Sidewall-F	-91.0	-2.4	3.2	-1.3	5.9
XRF-MSB1AX/Sidewall-G	54.5	-2.4	6.6	-1.3	5.4
XRF-MSB1AX/Sidewall-H	1,102.8	-2.4	42.1	42.8	6.9
XRF-MSB1AX/Sidewall-I	12,102.1	101.1	188.3	929.2	18.4

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-MSB1AX/Sidewall-J	1,234.0	14.4	9.8	-1.3	7.7
XRF-MSB1AX/Sidewall-K	373.5	-2.4	14.6	-1.3	5.4
XRF-MSB1AX/Sidewall-L	77.4	-2.4	8.8	-1.3	4.3
XRF-MSB1AX/Sidewall-M	730.8	-2.4	20.6	-1.3	6.1
XRF-MSB1AX/Sidewall-N	735.6	-2.4	13.7	-1.3	6.6
XRF-MSB1AX/Sidewall-O	-93.7	-2.4	4.3	-1.3	5.9
XRF-MSB1AX/Sidewall-P	2,804.6	1.1	64.8	-1.3	7.9
XRF-MSB1B/2.5-3.0/A1	45.6	-2.4	6.1	-1.3	0.0
XRF-MSB1B/3.0-3.5/A1	297.7	-2.4	7.1	-1.3	0.0
XRF-MSB1B/2.5-3.0/A2	458.7	-2.4	7.6	-1.3	0.0
XRF-MSB1B/3.0-3.5/A2	-55.6	-2.4	4.9	-1.3	0.4
XRF-MSB1B/2.5-3.0/A3	286.7	-2.4	2.9	-1.3	0.3
XRF-MSB1B/3.0-3.5/A3	-3.3	-2.4	4.2	-1.3	0.0
XRF-MSB1B/Sidewall A	-14.2	-2.4	3.0	-1.3	5.3
XRF-MSB1B/Sidewall B	-100.8	-2.4	4.6	2.4	0.0
XRF-MSB1B/Sidewall C	346.3	-0.3	9.9	11.9	0.0
XRF-MSB1B/Sidewall D	169.0	2.2	4.2	-1.3	0.6
XRF-MSB1B/Sidewall E	-103.4	-2.4	4.4	-1.3	0.4
XRF-MSB1B/3.5-4.0/B1	-101.7	-2.4	4.6	-1.3	4.6
XRF-MSB1B/4.0-4.5/B1	-84.0	-2.4	4.6	-1.3	5.4
XRF-MSB1B/Sidewall-C1	-99.7	-2.4	5.5	-1.3	4.9
XRF-MSB2A/1.0-1.5/A1	657.6	16.2	0.0	-1.3	0.0
XRF-MSB2A/1.5-2.0/A1	-91.7	-0.1	4.1	-1.3	0.0
XRF-MSB2A/1.0-1.5/A2	-42.8	-2.4	7.0	-1.3	0.0
XRF-MSB2A/1.5-2.0/A2	73.4	-2.4	8.7	-1.3	0.0
XRF-MSB2A/1.0-1.5/A3	1,313.6	1.1	19.7	-1.3	0.0
XRF-MSB2A/1.5-2.0/A3	3.4	-2.4	6.9	-1.3	0.0
XRF-MSB2A/1.0-1.5/A4	1,037.3	10.6	19.2	76.8	0.0
XRF-MSB2A/1.5-2.0/A4	-94.4	-2.4	5.7	-1.3	0.0
XRF-MSB2A/1.0-1.5/A5	-102.3	-0.7	5.2	58.9	0.0
XRF-MSB2A/1.5-2.0/A5	-59.1	-2.4	5.3	17.8	0.0
XRF-MSB2A/1.0-1.5/A6	5.8	-2.4	4.9	3.7	0.0
XRF-MSB2A/1.5-2.0/A6	37.6	-0.5	8.7	17.8	0.0
XRF-MSB2A/1.0-1.5/A7	2,972.1	11.1	54.8	17.0	0.0

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-MSB2A/1.5-2.0/A7	*7.8*	*1.4*	*4.8*	*-1.3*	*0.0*
XRF-MSB2A/1.0-1.5/A8	*-63.5*	*-0.4*	*6.0*	*1.7*	*0.0*
XRF-MSB2A/1.5-2.0/A8	*-13.4*	*-2.4*	*10.1*	*1.5*	*0.0*
XRF-MSB2A/1.0-1.5/A9	*-67.2*	*-2.4*	*4.1*	*-1.3*	*6.1*
XRF-MSB2A/1.5-2.0/A9	*-98.2*	*-2.4*	*4.3*	*-1.3*	*5.6*
XRF-MSB2A/1.0-1.5/A10	*-83.4*	*-2.4*	*4.6*	*-1.3*	*6.4*
XRF-MSB2A/1.5-2.0/A10	*310.4*	*-2.4*	*10.9*	*-1.3*	*6.3*
XRF-MSB2A/Sidewall-A	*1,082.9*	*-0.3*	*27.6*	*-1.3*	*0.0*
XRF-MSB2A/Sidewall-B	*2,912.9*	*5.0*	*65.9*	*7.9*	*0.0*
XRF-MSB2A/Sidewall-C	*1,011.7*	*6.1*	*2.8*	*2.4*	*0.0*
XRF-MSB2A/Sidewall-D	*-104.1*	*12.4*	*6.8*	*185.8*	*1.6*
XRF-MSB2A/Sidewall-E	*5,150.4*	*45.7*	*149.1*	*50.5*	*0.0*
XRF-MSB2A/Sidewall-F	*-28.6*	*-2.4*	*8.8*	*-1.3*	*6.6*
XRF-MSB2A/Sidewall-G	*11,903.9*	*-2.4*	*52.3*	*21.3*	*8.6*
XRF-MSB2A/Sidewall-H	*-91.7*	*-2.4*	*4.0*	*-1.3*	*6.1*
XRF-MSB2A/Sidewall-I	*271.4*	*-2.4*	*19.4*	*-1.3*	*7.1*
XRF-MSB2A/Sidewall-J	*87.6*	*-2.4*	*3.9*	*-1.3*	*6.7*
XRF-MSB2A/Sidewall-K	*298.1*	*-2.4*	*34.4*	*12.5*	*6.6*
XRF-MSB2A/Sidewall-L	*2,058.9*	*-2.4*	*8.8*	*9.4*	*7.1*
XRF-MSB2A/Sidewall-M	*912.3*	*-2.4*	*29.3*	*-1.3*	*5.9*
XRF-MSB2A/2.0-2.5/C1	*-99.2*	*-2.4*	*2.9*	*-1.3*	*7.4*
XRF-MSB2A/2.5-3.0/C1	*-100.8*	*-2.4*	*2.2*	*-1.3*	*6.1*
XRF-MSB2A/2.0-2.5/A3	*-95.2*	*-2.4*	*5.5*	*-1.3*	*5.9*
XRF-MSB2A/2.5-3.0/A3	*-93.3*	*-2.4*	*4.4*	*-1.3*	*6.0*
XRF-MSB2A/2.0-2.5/B4	*-33.8*	*-2.4*	*4.5*	*-0.1*	*5.7*
XRF-MSB2A/2.5-3.0/B4	*-93.8*	*-2.4*	*6.5*	*-1.3*	*5.6*
XRF-MSB2A/2.0-2.5/B7	*-86.1*	*-2.4*	*5.4*	*-1.3*	*6.1*
XRF-MSB2A/2.5-3.0/B7	*-95.2*	*-2.4*	*4.9*	*-1.3*	*6.0*
XRF-MSB2A/Sidewall-B2	*17,601.1*	*44.0*	*285.0*	*11.2*	*5.3*
XRF-MSB2A/Sidewall-D2	*91.0*	*4.3*	*16.8*	*69.2*	*7.0*
XRF-MSB2A/Sidewall-E2	*593.7*	*0.0*	*58.1*	*1.7*	*5.4*
XRF-MSB2A/Sidewall-G2	*-95.2*	*-2.4*	*2.7*	*-1.3*	*6.0*
XRF-MSB2A/Sidewall-I2	*450.3*	*-2.4*	*24.0*	*22.5*	*7.3*
XRF-MSB2A/Sidewall-K2	*2,687.0*	*0.3*	*61.6*	*2.2*	*5.0*
XRF-MSB2A/Sidewall-L2	*8,262.4*	*22.7*	*312.5*	*-1.3*	*20.1*
XRF-MSB2A/Sidewall-M2	*2,493.3*	*13.6*	*57.5*	*-1.3*	*6.3*

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	970.0
Antimony	37.0
Arsenic	20.0
Cadmium	77.0
Selenium	53.0

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	XRF Lead	XRF Antimony	XRF Arsenic	XRF Cadmium	XRF Selenium
XRF-MSB2A/Sidewall-B3	890.9	-2.4	2.4	-1.3	7.3
XRF-MSB2B/6.0-6.5/A1	-99.7	-2.4	5.2	-1.3	5.7
XRF-MSB2B/6.5-7.0/A1	-96.8	-2.4	4.7	-1.3	5.9
XRF-MSB2B/6.0-6.5/A2	-96.0	-2.4	4.5	-1.3	6.7
XRF-MSB2B/6.5-7.0/A2	-99.0	-2.4	4.9	-1.3	5.9
XRF-MSB2B/6.0-6.5/A3	-98.6	-2.4	5.0	-1.3	6.0
XRF-MSB2B/6.5-7.0/A3	-95.2	-2.4	5.1	-1.3	5.4
XRF-MSB2B/Sidewall-A	-96.1	-2.4	4.4	1.2	5.0
XRF-MSB2B/Sidewall-B	-93.3	-2.4	5.2	-1.3	6.0
XRF-MSB2B/Sidewall-C	-32.6	-2.4	6.9	-1.3	5.1
XRF-MSB2B/Sidewall-D	-68.8	-2.4	4.9	-1.3	5.7
XRF-MSB2B/Sidewall-E	-73.1	-2.4	4.8	-1.3	5.0
XRF-MSB2B/Sidewall-F	-100.1	-2.4	10.2	-1.3	6.0
XRF-MSB2B/Sidewall-G	-93.8	-2.4	4.4	-1.3	5.4
XRF-MSB2B/Sidewall-H	-98.2	-2.4	4.5	-1.3	5.9
XRF-MSB2B/Sidewall-F2	-100.0	-0.4	4.5	-1.3	5.1
XRF-Lagoon/1.0-1.5/A1	-104.5	-2.4	4.4	-1.3	0.0
XRF-Lagoon/1.5-2.0/A1	-103.9	-0.3	4.6	-1.3	0.0
XRF-Lagoon/1.0-1.5/A2	-103.4	-0.1	4.5	-1.3	0.0
XRF-Lagoon/1.5-2.0/A2	-99.4	-0.3	4.6	-1.3	0.0
XRF-Lagoon/1.0-1.5/A3	-95.7	-2.4	4.5	-1.3	6.4
XRF-Lagoon/1.5-2.0/A3	-90.2	-2.4	4.7	-1.3	6.3
XRF-Lagoon/1.0-1.5/A4	-94.8	-2.4	4.7	-1.3	6.3
XRF-Lagoon/1.5-2.0/A4	-96.4	-2.4	4.7	-1.3	5.4
XRF-Lagoon/1.0-1.5/A5	-84.1	-2.4	6.7	-1.3	6.6
XRF-Lagoon/1.5-2.0/A5	-96.9	-2.4	4.8	-1.3	5.3
XRF-Lagoon/Sidewall-A	1,091.9	-2.4	44.2	-1.3	0.0
XRF-Lagoon/Sidewall-B	-95.0	-2.4	5.4	-1.3	0.0
XRF-Lagoon/Sidewall-C	-31.7	-2.4	7.4	-1.3	0.0
XRF-Lagoon/Sidewall-D	2.0	-2.4	6.3	-1.3	0.0
XRF-Lagoon/Sidewall-E	-86.1	-2.4	6.6	-1.3	0.0
XRF-Lagoon/Sidewall-F	10.0	-2.4	4.7	-1.3	0.0
XRF-Lagoon/Sidewall-G	399.2	-2.4	7.5	-1.3	0.0
XRF-Lagoon/Sidewall-H	-92.8	-2.4	5.2	-1.3	0.0
XRF-Lagoon/Sidewall-I	-96.8	-2.4	5.4	-1.3	0.0
XRF-Lagoon/Sidewall-J	-89.7	-2.4	6.9	-1.3	0.0

REFINED METALS CORPORATION
BEECH GROVE, INDIANA HWMU CLOSURE
TABLE 3 - CONFIRMATORY SAMPLE RESULTS (XRF Corrected)

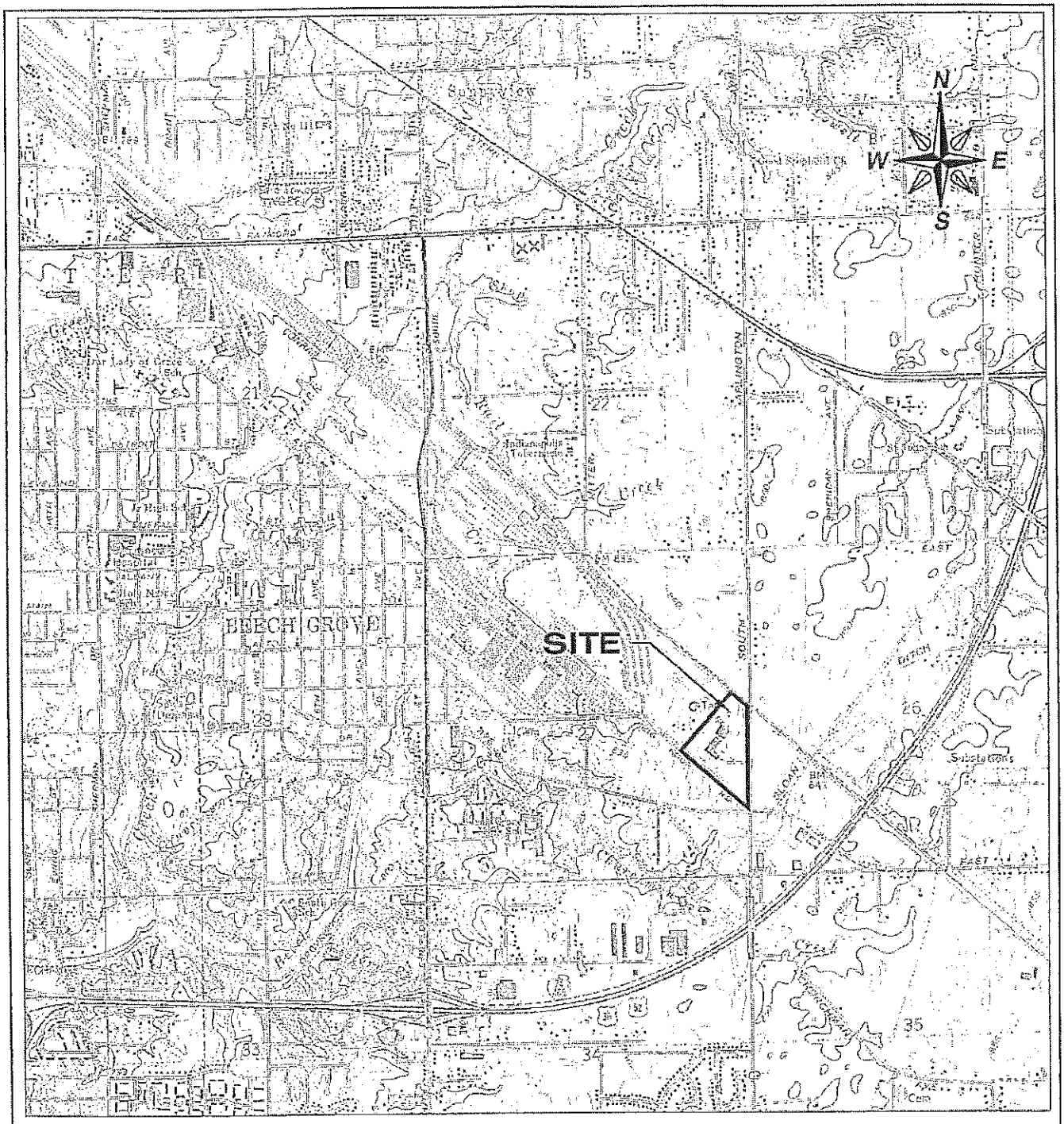
Refined Metals Corporation - Beech Grove CMI PRG's

Lead (Onsite, HWMU)	*970.0*
Antimony	*37.0*
Arsenic	*20.0*
Cadmium	*77.0*
Selenium	*53.0*

Corrected XRF Data - All values in mg/kg (or ppm)

XRF Sample ID	*XRF Lead*	*XRF Antimony*	*XRF Arsenic*	*XRF Cadmium*	*XRF Selenium*
XRF-Lagoon/Sidewall-K	*-96.1*	*-2.4*	*6.8*	*-1.3*	*0.0*
XRF-Lagoon/Sidewall-L	*-98.4*	*-2.4*	*4.9*	*-1.3*	*0.0*
XRF-Lagoon/Sidewall-M	*-55.6*	*-2.4*	*4.9*	*-1.3*	*0.0*
XRF-Lagoon/Sidewall-N	*-93.7*	*-2.4*	*4.7*	*-1.3*	*0.0*
XRF-Lagoon/Sidewall-O	*-106.3*	*-2.4*	*3.9*	*-1.3*	*0.0*
XRF-Lagoon/Sidewall-P	*-60.9*	*-0.6*	*5.5*	*-1.3*	*0.0*
XRF-Lagoon/Sidewall-Q	*-87.0*	*0.6*	*4.1*	*-1.3*	*0.0*
XRF-Lagoon/Sidewall-R	*3,121.9*	*15.4*	*8.2*	*-1.3*	*0.0*

FIGURES



REF. U.S.G.S. 7 1/2 MINUTE
BEECH GROVE, IND
QUADRANGLE MAP

CORRECTIVE MEASURES DESIGN
REFINED METALS CORPORATION

BEECH GROVE, INDIANA

2000 0 2000 4000

SCALE IN FEET

J:\REFINED METALS\DRAWINGS\2003-1046-05\2003-1046-05-02

Scale: 1"=2000'	SITE LOCATION MAP
Originated By: K.M.S.	
Drawn By: P.S.G.	
Checked By: S.W.K.	
Project Mgr: P.C.S.	
Dwg No. 2003-1046-05-07	
Issued:	Project No. 2003-1046-05

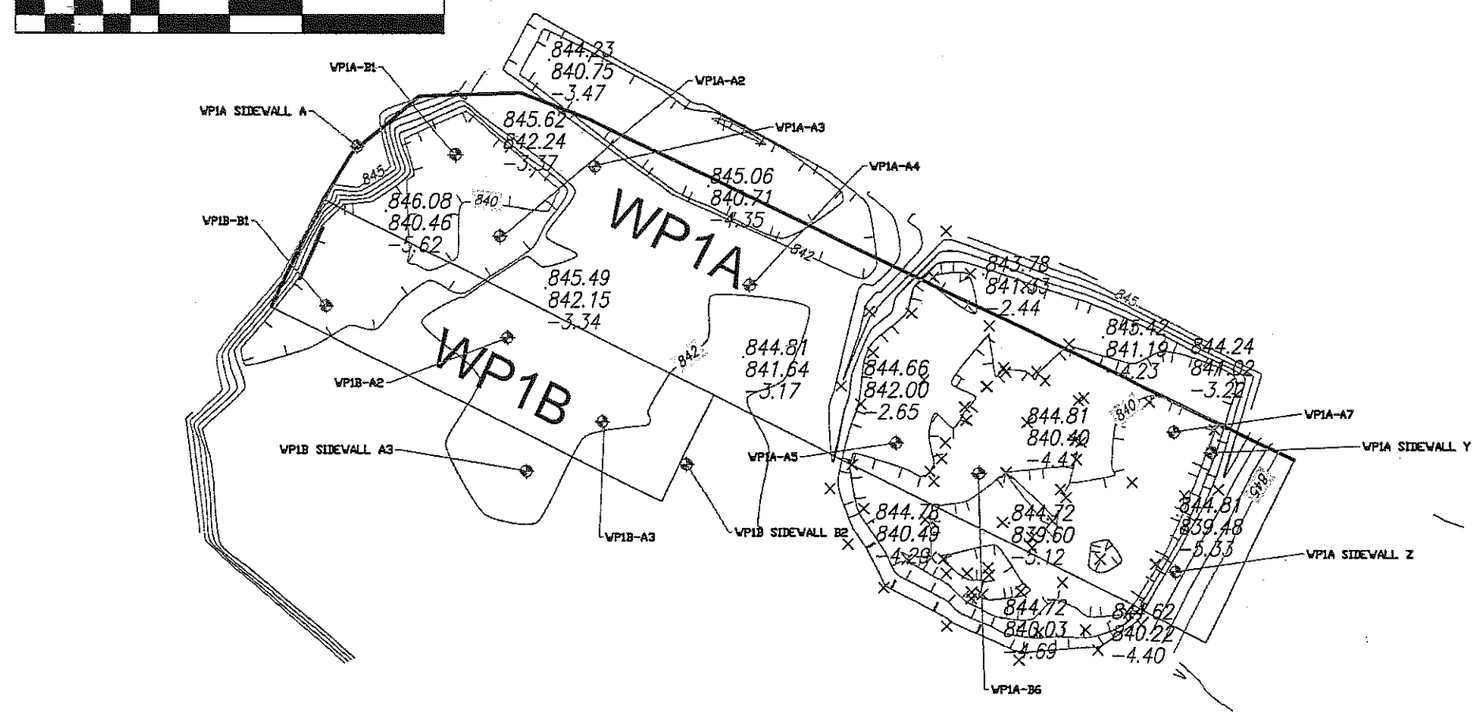
Advanced GeoServices Corp.
1055 Andrew Drive, Suite A
West Chester, Pennsylvania 19380
(610) 840-9100
FAX: (610) 840-9199

FIGURE: 1

NORTH

GRAPHIC SCALE

30 0 15 30 60



HWMU Area WP1A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP1A	XRF-WP1A/3.5-4.0/B1	XRF	15.4	ND	5.0	ND	5.0
WP1A	XRF-WP1A/4.0-4.5/B1	XRF	17.0	ND	4.5	ND	5.1
WP1A	XRF-WP1A/2.5-3.0/A2	XRF	66.9	ND	9.2	ND	5.0
WP1A	XRF-WP1A/3.0-3.5/A2	XRF	41.0	ND	7.7	ND	5.9
WP1A	XRF-WP1A/2.5-3.0/A3	XRF	71.9	ND	3.3	ND	7.6
WP1A	XRF-WP1A/3.0-3.5/A3	XRF	48.7	ND	8.5	ND	7.4
WP1A	XRF-WP1A/2.5-3.0/A4	XRF	26.0	ND	6.2	ND	5.9
WP1A	XRF-WP1A/3.0-3.5/A4	XRF	19.0	ND	6.5	1.2	4.7
WP1A	WP1A/2.5-3.0/A5	Lab	34.4	U (1.1)	7.6	U (0.56)	U (1.1)
WP1A	WP1A/3.0-3.5/A5	Lab	222.0	1.0	6.9	U (0.5)	U (1)
WP1A	WP1A/3.0-3.5/B6	Lab	7.7	U (1.1)	8.7	U (0.57)	U (1.1)
WP1A	WP1A/3.5-4.0/B6	Lab	9.0	U (1.1)	10.6	U (0.56)	U (1.1)
WP1A	WP1A/2.5-3.0/A7	Lab	7.5	U (0.97)	6.8	U (0.48)	U (0.97)
WP1A	WP1A/3.0-3.5/A7	Lab	11.7	U (0.97)	8.2	U (0.49)	U (0.97)
WP1A	XRF-WP1A/Sidewall-A	XRF	138.2	ND	3.3	ND	5.7
WP1A	WP1A/Sidewall-Y	Lab	7.4	U (1.1)	10.1	0.54	U (1.1)
WP1A	WP1A/Sidewall-Z	Lab	27.4	U (1)	9.9	0.54	U(1)

HWMU Area WP1B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP1B	XRF-WP1B/2.0-2.5/B1	XRF	16.0	ND	5.1	ND	6.0
WP1B	XRF-WP1B/2.5-3.0/B1	XRF	12.9	ND	4.7	ND	5.3
WP1B	WP1B/1.0-1.5/A2	Lab	1,740	15.6	12.6	1.2	2.6
WP1B	XRF-WP1B/1.5-2.0/A2	XRF	18.9	ND	7.4	ND	6.7
WP1B	WP1B/1.0-1.5/A3	Lab	34.3	U (1.2)	12.8	U (0.61)	U (1.2)
WP1B	XRF-WP1B/1.5-2.0/A3	XRF	58.0	ND	7.5	ND	5.0
WP1B	XRF-WP1B/Sidewall-A3	XRF	59.7	ND	3.8	ND	7.3
WP1B	XRF-WP1B/Sidewall-B2	XRF	20.6	ND	3.5	ND	5.7

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.
Ten sidewall locations initially laid out in WP1A (A - J). Final excavation depth and extent in WP1A and surrounding areas resulted in no sidewall remaining to be sampled in may locations. Sidewall results shown for locations remaining inside pre-defined limits of the HWMU.

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
WP1A Excavation Volume	1.00	1.00	618.12sq.yd	713 Cu. Yd.	0 Cu. Yd.	713 Cu. Yd.<Cut>
WP1A 9-15-2015EXCAVATION AREA	1.00	1.00	611.89sq.yd	791 Cu. Yd.	2 Cu. Yd.	789 Cu. Yd.<Cut>
WP1B Excavation Volume	1.00	1.00	704.21sq.yd	894 Cu. Yd.	0 Cu. Yd.	894 Cu. Yd.<Cut>
WP1A INSIDE DESIGN AREA	1.00	1.00	469.79sq.yd	555 Cu. Yd.	0 Cu. Yd.	555 Cu. Yd.<Cut>
Totals			2404.03sq.yd	2954 Cu. Yd.	2 Cu. Yd.	2951 Cu. Yd.<Cut>

NOTES:
1. POST-EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST-CONSTRUCTION SURVEY, WP1A & WP1B EXCAVATION VOLUME.
2. **** DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE-DEFINED LIMITS

EXCAVATION AREA PRE-DEFINED LIMITS

POST-EXCAVATION SAMPLE LOCATION

◆ SIDEWALL A

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST-EXCAVATION CONDITIONS
WP1A & WP1B

ADVANCED GeoServices
Engineering for the Environment. Planning for People.
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale: 1" = 30'
Drawn By: JSD/SDW
Checked By: PGS
Project Mgr.: JSD
Originated By: PGS
Project No.: 2003-1046
Drawing Date: 8/21/2015
Sheet No.: 2 OF 11
Revision Number: 0

FIGURE 2

NORTH

GRAPHIC SCALE

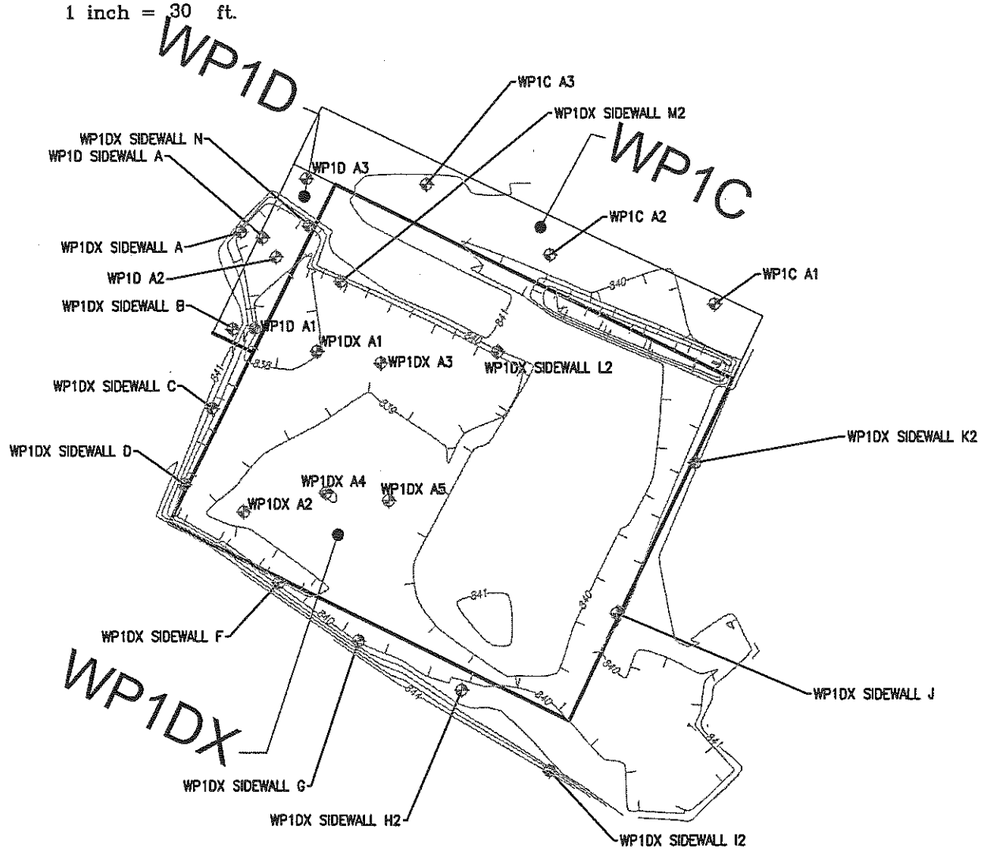
30 0 15 30 60

(IN FEET)

1 inch = 30 ft.

Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
WP1D EXCAVATION VOLUME	65.75sq.yd	125 Cu. Yd.	0 Cu. Yd.	125 Cu. Yd.<Cut>
WP1C EXCAVATION VOLUME	192.08sq.yd	291 Cu. Yd.	0 Cu. Yd.	291 Cu. Yd.<Cut>
WP1DX EXCAVATION VOLUME	1054.90sq.yd	1777 Cu. Yd.	0 Cu. Yd.	1777 Cu. Yd.<Cut>
Totals	1312.74sq.yd	2193 Cu. Yd.	0 Cu. Yd.	2193 Cu. Yd.<Cut>



NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, WP1C, WP1D & WP1DX EXCAVATION VOLUME.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

◆ SIDEWALL A POST–EXCAVATION SAMPLE LOCATION

HWMU Area WP1C Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP1C	XRF-WP1C/1.3-1.8/A1	XRF	18.4	ND	7.9	1.8	5.3
WP1C	XRF-WP1C/1.8-2.3/A1	XRF	493.1	ND	2.5	ND	5.7
WP1C	XRF-WP1C/1.3-1.8/A2	Lab	6.8	U (1.1)	9.3	4.0	U (1.1)
WP1C	XRF-WP1C/1.8-2.3/A2	Lab	6.2	U (1.1)	7.5	1.3	U (1.1)
WP1C	XRF-WP1C/1.3-1.8/A3	Lab	7.8	U (0.97)	8.6	U (0.48)	U (0.97)
WP1C	XRF-WP1C/1.8-2.3/A3	Lab	15.1	U (1.1)	7.6	U (0.53)	U (1.1)

Six sidewall locations initially laid out in WP1C (A - F). Final excavation depth and extent in WP1C and surrounding areas resulted in no sidewall remaining to be sampled in many locations. Sidewall results shown for locations remaining inside pre-defined limits of the HWMU.

HWMU Area WP1D Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
WP1D	XRF-WP1D/3.3-3.8/A1	XRF	30.0	2.8	6.5	2.2	ND
WP1D	WP1D/3.8-4.3/A1	Lab	430.0	1.4	8.4	0.81	U (1)
WP1D	XRF-WP1D/3.3-3.8/A2	XRF	39.3	1.6	6.1	ND	ND
WP1D	XRF-WP1D/3.8-4.3/A2	XRF	39.4	0.5	3.9	0.1	ND
WP1D	WP1D/3.3-3.8/A3	Lab	515.0	3.2	11.7	1.4	U (1)
WP1D	WP1D/3.8-4.3/A3	Lab	325.0	1.9	10.6	1.1	U (1.1)
WP1D	XRF-WP1D-Sidewall-A	XRF	180.4	10.8	3.7	2.9	ND

Two sidewall locations initially laid out in WP1D (A - B). Final excavation depth and extent in WP1D and surrounding areas (WP1DX) resulted in no sidewall remaining to be sampled in B location. Sidewall results shown for locations remaining inside pre-defined limits of the HWMU.

HWMU Area WP1DX Post-Excavation Data Summary (Final Conditions)
(Samples added to area beyond CMD limits).

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP1DX	XRF-WP1DX/3.0-3.5/A1	XRF	44.3	ND	5.5	ND	6.4
WP1DX	XRF-WP1DX/3.5-4.0/A1	XRF	18.6	ND	4.8	ND	6.3
WP1DX	XRF-WP1DX/3.0-3.5/A2	XRF	20.6	ND	7.5	ND	4.3
WP1DX	XRF-WP1DX/3.5-4.0/A2	XRF	17.7	ND	4.2	ND	5.9
WP1DX	XRF-WP1DX/2.0-2.5/A3	XRF	57.7	ND	7.0	ND	5.9
WP1DX	WP1DX/2.5-3.0/A3	Lab	8.3	U (1.1)	8.6	U (0.53)	U (1.1)
WP1DX	XRF-WP1DX/3.0-3.5/A4	XRF	27.6	ND	4.6	ND	6.3
WP1DX	XRF-WP1DX/3.5-4.0/A4	XRF	22.1	ND	4.1	ND	6.0
WP1DX	XRF-WP1DX/3.0-3.5/A5	XRF	18.9	ND	5.4	ND	5.4
WP1DX	WP1DX/3.5-4.0/A5	Lab	7.5	U (0.99)	7.8	U (0.5)	U (0.99)
WP1DX	WP1DX/Sidewall-A	Lab	184.0	2.1	10.6	0.73	U (1)
WP1DX	XRF-WP1DX/Sidewall-B	XRF	29.4	ND	4.7	6.7	4.7
WP1DX	WP1DX/Sidewall-C	Lab	228.0	7.3	6.1	0.57	U (0.95)
WP1DX	XRF-WP1DX/Sidewall-D	XRF	41.7	ND	5.6	ND	6.0
WP1DX	WP1DX/Sidewall-F	Lab	681.0	2.1	9.0	1.3	U (1)
WP1DX	XRF-WP1DX/Sidewall-G*	XRF	168.1	ND	8.5	ND	6.1
WP1DX	XRF-WP1DX/Sidewall-H2	XRF	17.0	ND	4.8	ND	5.1
WP1DX	XRF-WP1DX/Sidewall-I2	XRF	20.9	ND	5.1	ND	5.7
WP1DX	XRF-WP1DX/Sidewall-J	XRF	234.8	ND	5.8	ND	6.6
WP1DX	XRF-WP1DX/Sidewall-K2	XRF	17.9	ND	4.5	ND	4.1
WP1DX	XRF-WP1DX/Sidewall-L2	XRF	55.1	ND	6.0	ND	5.7
WP1DX	XRF-WP1DX/Sidewall-M2	XRF	17.3	ND	5.2	ND	6.1
WP1DX	XRF-WP1DX/Sidewall-N	XRF	58.7	ND	4.9	ND	5.7

Fourteen sidewall locations initially laid out in WP1DX (A - N). Final excavation depth and extent in WP1D and surrounding areas (WP3A, WP1DX) resulted in no sidewall remaining to be sampled in B location. Sidewall results shown for locations remaining inside pre-defined limits of the HWMU.

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP1C, WP1D, & WP1DX

ADVANCED GeoServices
Engineering for the Environment. Planning for People.
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale	1" = 30'
Drawn By	JSD/SDW
Checked By	PGS
Project Mgr.	JSD
Originated By	PGS
Project No.	2003–1046
Drawing Date	8/21/2015
Sheet No.	3 OF 11
Revision Number	0

FIGURE 3

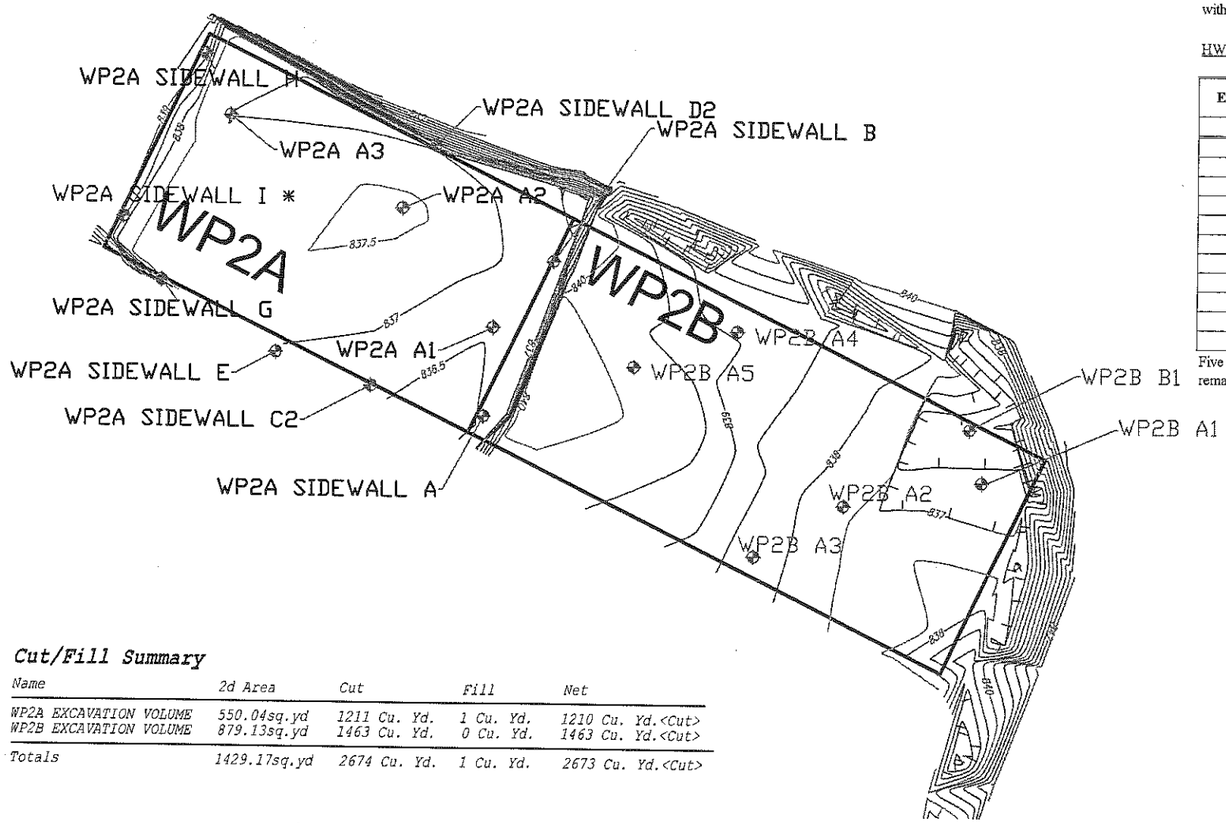
NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)

1 inch = 30 ft.



Cut/Fill Summary

Name	*2d Area*	*Cut*	*Fill*	*Net*
WP2A EXCAVATION VOLUME	*550.04sq.yd*	*1211 Cu. Yd.*	*1 Cu. Yd.*	*1210 Cu. Yd.<Cut>*
WP2B EXCAVATION VOLUME	*879.13sq.yd*	*1463 Cu. Yd.*	*0 Cu. Yd.*	*1463 Cu. Yd.<Cut>*
Totals	*1429.17sq.yd*	*2674 Cu. Yd.*	*1 Cu. Yd.*	*2673 Cu. Yd.<Cut>*

HWMU Area WP2A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP2A	XRF-WP2A/7.3-7.8/A1	XRF	85.4	ND	10.5	ND	6.7
WP2A	XRF-WP2A/7.8-8.3/A1	XRF	488.1	ND	11.1	ND	5.4
WP2A	XRF-WP2A/7.3-7.8/A2	XRF	19.0	ND	4.6	ND	5.9
WP2A	XRF-WP2A/7.8-8.3/A2	XRF	367.9	ND	4.8	ND	6.3
WP2A	WP2A/7.3-7.8/A3	Lab	112.0	2.2	8.1	0.52	U (1)
WP2A	XRF-WP2A/7.8-8.3/A3	XRF	17.6	ND	5.1	ND	5.7
WP2A	WP2A/Sidewall-A	Lab	459.0	2.4	11.8	0.89	U (1.1)
WP2A	XRF-WP2A/Sidewall-B	XRF	163.7	ND	9.5	ND	6.0
WP2A	XRF-WP2A/Sidewall-C2	Lab	58.5	U (1)	10.9	2.0	U (1)
WP2A	XRF-WP2A/Sidewall-D2	Lab	99.1	1.2	11.8	4.2	U (1)
WP2A	WP2A/Sidewall-E	Lab	186	2.2	12.6	0.98	U (1.2)
WP2A	XRF-WP2A/Sidewall-G	XRF	38.4	ND	5.5	ND	4.7
WP2A	XRF-WP2A/Sidewall-H	XRF	37.4	ND	7.2	ND	5.1
WP2A	XRF-WP2A/Sidewall-I	XRF	16	ND	6.1	ND	5.3

Nine sidewall locations initially laid out in WP1D (A - I). Final excavation extent in WP2A resulted in no sidewall remaining to be sampled at F location within pre-defined limits of the HWMU.

HWMU Area WP2B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP2B	XRF-WP2B/3.0-3.5/A1	XRF	17.0	ND	5.3	ND	4.0
WP2B	XRF-WP2B/4.5-5.0/B1	XRF	22.7	ND	4.6	ND	7.1
WP2B	XRF-WP2B/5.0-5.5/B1	XRF	19.3	ND	5.2	ND	5.6
WP2B	XRF-WP2B/2.5-3.0/A2	XRF	15.9	ND	6.9	ND	5.3
WP2B	XRF-WP2B/3.0-3.5/A2	XRF	13.3	ND	6.3	ND	5.3
WP2B	XRF-WP2B/2.5-3.0/A3	XRF	17.1	ND	5.0	ND	5.9
WP2B	WP2B/3.0-3.5/A3	Lab	53.0	1.6	8.4	U (0.48)	U (0.96)
WP2B	XRF-WP2B/2.5-3.0/A4	XRF	17.6	ND	5.9	ND	5.7
WP2B	WP2B/3.0-3.5/A4	Lab	10.1	U (1.1)	10.5	U (0.56)	U (1.1)
WP2B	XRF-WP2B/2.5-3.0/A5	XRF	28.3	ND	5.8	ND	5.0
WP2B	XRF-WP2B/3.0-3.5/A5	XRF	18.7	ND	6.3	ND	5.6

Five sidewall locations initially laid out in WP2B (A - E). Final excavation depth and extent in WP2B and surrounding areas resulted in no sidewall remaining to be sampled within pre-defined limits of the HWMU.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, WP2A & WP2A EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 0.5–FT INTERVALS.
3. * DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

◆ SIDEWALL A POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP2A & WP2B

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WEST CHESTER, PENNSYLVANIA 19380
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Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	8/21/2015
Sheet No.:	4 OF 11
Revision Number:	0

FIGURE 4

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\HWMU\ACAD-WP2A WP2B EXCAVATION VOLUME-Model.dwg, 6/7/2016 11:01:07 AM, DWG To PDF-FLAT.pc3

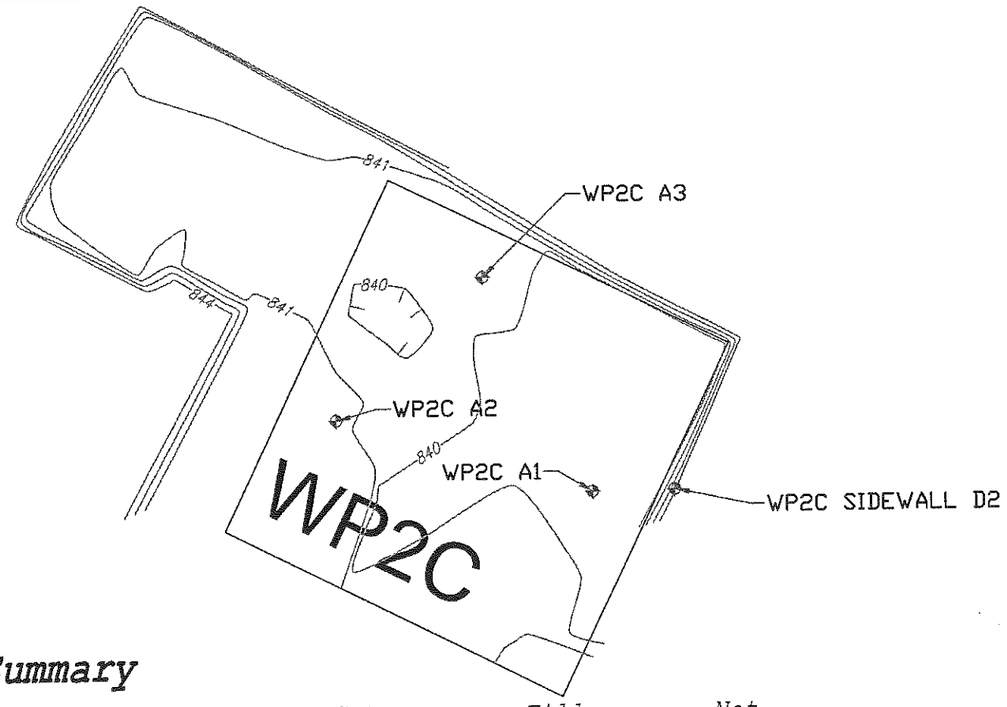
NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20 ft.



Cut/Fill Summary

Name	*2d Area*	*Cut*	*Fill*	*Net*
WP2C EXCAVATION VOLUME	*537.90sq.yd*	*657 Cu. Yd.*	*0 Cu. Yd.*	*657 Cu. Yd.<Cut>*
Totals	*537.90sq.yd*	*657 Cu. Yd.*	*0 Cu. Yd.*	*657 Cu. Yd.<Cut>*

HWMU Area WP2C Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP2C	XRF-WP2C/1.0-1.5/A1	XRF	18.0	ND	5.5	41.0	6.3
WP2C	XRF-WP2C/1.5-2.0/A3	XRF	16.3	ND	5.2	20.6	4.7
WP2C	XRF-WP2C/1.0-1.5/A2	XRF	13.7	ND	4.8	ND	5.1
WP2C	WP2C/1.5-2.0/A2	Lab	120.0	U (1)	9.1	0.56	U (1)
WP2C	XRF-WP2C/1.0-1.5/A3	XRF	28.4	ND	6.3	ND	6.3
WP2C	XRF-WP2C/1.5-2.0/A3	XRF	15.4	ND	5.1	ND	4.7
WP2C	WP2C/Sidewall-D2	Lab	120.0	U (1.2)	12.0	U (0.58)	U (1.2)

Four sidewall locations initially laid out in WP2C (A - D). Final excavation depth and extent in WP2C and surrounding areas (WP1DX, MSB2A, ad WP1A) resulted in no sidewall remaining to be sampled within pre-defined limits of the HWMU. Only Sidewall-D remained to be collected on eastern sidewall.

NOTES:

1. POST-EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST-EXCAVATION SURVEY, WP2C EXCAVATION VOLUME.

LEGEND:

HWMU PRE-DEFINED LIMITS

EXCAVATION AREA PRE-DEFINED LIMITS

◆ SIDEWALL A POST-EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST-EXCAVATION CONDITIONS
WP2C

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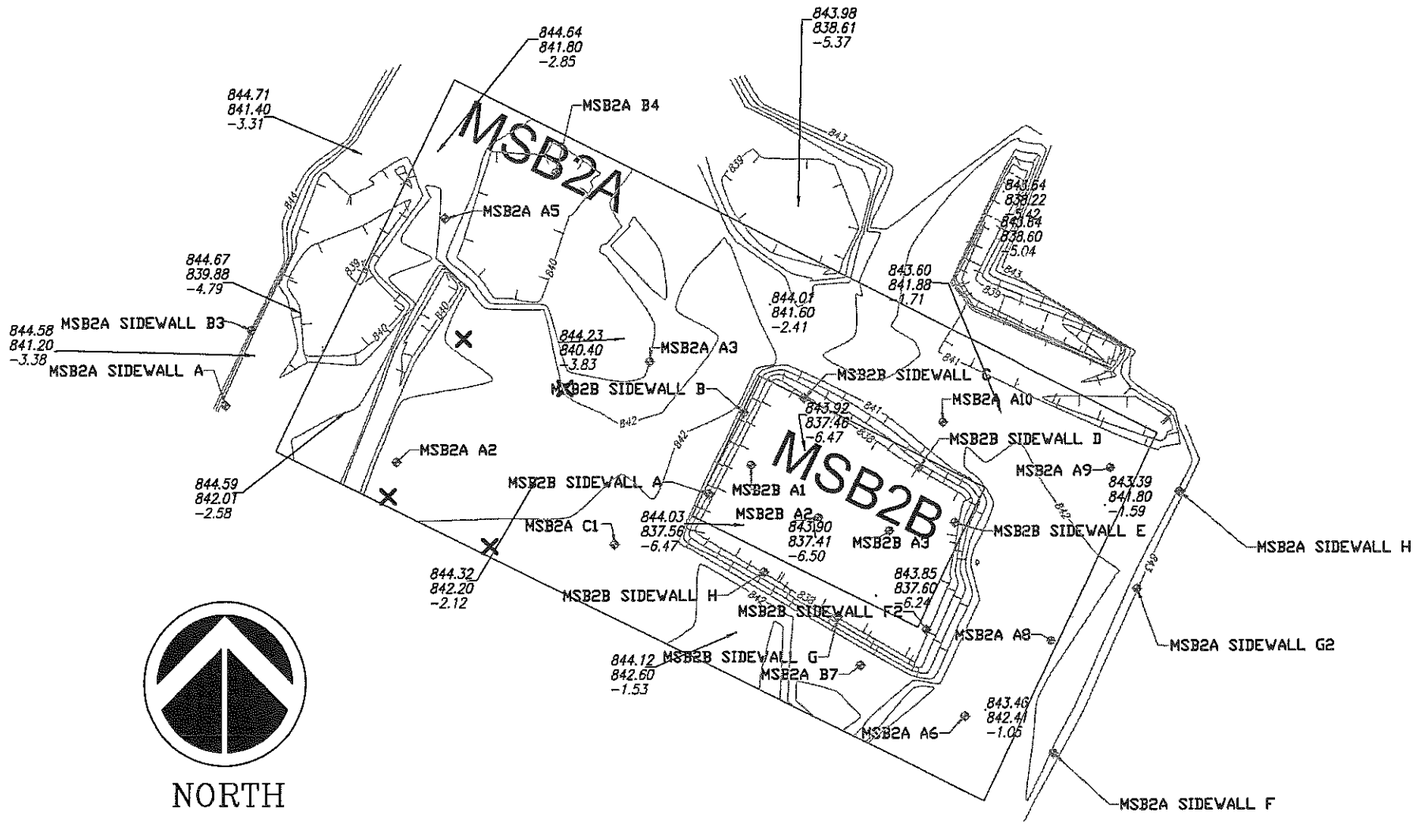
Originated By	PGS
Project No.	2003-1046
Drawing Date	8/21/2015
Sheet No.	5 OF 11
Revision Number	0

FIGURE 5

Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
MSB2A SMALL HOLE EXCAVATION VOLUME	11.00sq.yd	18 Cu. Yd.	0 Cu. Yd.	18 Cu. Yd.<Cut>
MSB2A BIG HOLE EXCAVATION VOLUME	94.00sq.yd	430 Cu. Yd.	0 Cu. Yd.	430 Cu. Yd.<Cut>
MSB2A EXCAVATION VOLUME	1755.18sq.yd	1568 Cu. Yd.	0 Cu. Yd.	1568 Cu. Yd.<Cut>
MSB2B EXCAVATION VOLUME	298.22sq.yd	547 Cu. Yd.	0 Cu. Yd.	547 Cu. Yd.<Cut>
Totals	2158.39sq.yd	2563 Cu. Yd.	0 Cu. Yd.	2563 Cu. Yd.<Cut>



NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)

1 inch = 30 ft.

NOTES:

1. POST-EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST-EXCAVATION SURVEY, MSB2A & MSB2B EXCAVATION VOLUMES.
2. BIG HOLE AND SMALL HOLE VOLUMES CALCULATED USING FIELD MEASUREMENTS.

LEGEND:

HWMU PRE-DEFINED LIMITS

EXCAVATION AREA PRE-DEFINED LIMITS

SIDEWALL A — POST-EXCAVATION SAMPLE LOCATION

HWMU Area MSB2A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm) Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
MSB2A	MSB2A/2.0-2.5/C1	Lab	3.5	1.5	4.2	U (0.47)	1.7
MSB2A	XRF-MSB2A/2.5-3.0/C1	XRF	11.1	ND	2.2	ND	6.1
MSB2A	XRF-MSB2A/1.0-1.5/A2	XRF	54.6	ND	7.0	ND	ND
MSB2A	XRF-MSB2A/1.5-2.0/A2	XRF	73.4	ND	8.7	ND	ND
MSB2A	XRF-MSB2A/1.5-2.0/A3	XRF	3.4	ND	6.9	ND	ND
MSB2A	XRF-MSB2A/2.0-2.5/A3	XRF	15.3	ND	5.5	ND	5.9
MSB2A	XRF-MSB2A/2.5-3.0/A3	XRF	16.7	ND	4.4	ND	6.0
MSB2A	XRF-MSB2A/2.0-2.5/B4	XRF	61.4	ND	4.5	1.6	5.7
MSB2A	XRF-MSB2A/2.5-3.0/B4	XRF	16.3	ND	6.5	ND	5.6
MSB2A	XRF-MSB2A/1.0-1.5/A5	XRF	9.9	ND	5.7	58.9	ND
MSB2A	XRF-MSB2A/1.5-2.0/A5	XRF	42.4	ND	5.3	17.8	ND
MSB2A	XRF-MSB2A/1.0-1.5/A6	XRF	5.8	ND	4.9	3.7	ND
MSB2A	XRF-MSB2A/1.5-2.0/A6	XRF	37.6	6.6	8.7	17.8	ND
MSB2A	XRF-MSB2A/2.0-2.5/B7	XRF	23.1	ND	5.4	ND	6.1
MSB2A	XRF-MSB2A/2.5-3.0/B7	XRF	15.3	ND	4.9	ND	6.0
MSB2A	XRF-MSB2A/1.0-1.5/A8	XRF	39.1	6.9	6.0	1.7	ND
MSB2A	XRF-MSB2A/1.5-2.0/A8	XRF	76.7	ND	10.1	1.5	ND
MSB2A	XRF-MSB2A/1.0-1.5/A9	XRF	36.3	ND	4.1	ND	6.1
MSB2A	XRF-MSB2A/1.5-2.0/A9	XRF	13.0	ND	4.3	ND	5.6
MSB2A	XRF-MSB2A/1.0-1.5/A10	XRF	24.1	ND	4.6	ND	6.4
MSB2A	MSB2A/1.5-2.0/A10	Lab	84.4	1.0	9.0	0.51	U (1)
MSB2A	MSB2A/Sidewall-A	Lab	325.0	1.8	10.5	2.1	U (1.1)
MSB2A	XRF-MSB2A/Sidewall-B3	XRF	890.9	ND	2.4	ND	7.3
MSB2A	XRF-MSB2A/Sidewall-F	XRF	65.3	ND	8.8	ND	6.6
MSB2A	XRF-MSB2A/Sidewall-G2	XRF	15.3	ND	2.7	ND	6.0
MSB2A	XRF-MSB2A/Sidewall-H	XRF	17.9	ND	4.0	ND	6.1

Thirteen sidewall locations initially laid out in MSB2A (A - M). Final excavation depth and extent in MSB2A and surrounding areas (WP1DX, MSB1A, and WP1A) resulted in no sidewall remaining to be sampled within pre-defined limits of the HWMU.

HWMU Area MSB2B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm) Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
MSB2B	XRF-MSB2B/6.0-6.5/A1	XRF	11.9	ND	5.2	ND	5.7
MSB2B	XRF-MSB2B/6.5-7.0/A1	XRF	14.1	ND	4.7	ND	5.9
MSB2B	XRF-MSB2B/6.0-6.5/A2	XRF	14.7	ND	4.5	ND	6.7
MSB2B	XRF-MSB2B/6.5-7.0/A2	XRF	12.4	ND	4.9	ND	5.9
MSB2B	XRF-MSB2B/6.0-6.5/A3	XRF	13.7	ND	5.0	ND	6.0
MSB2B	XRF-MSB2B/6.5-7.0/A3	XRF	15.3	ND	5.1	ND	5.4
MSB2B	XRF-MSB2B/Sidewall-A	XRF	14.6	ND	4.4	1.2	5.0
MSB2B	XRF-MSB2B/Sidewall-B	XRF	16.7	ND	5.2	ND	6.0
MSB2B	XRF-MSB2B/Sidewall-C	XRF	62.3	ND	6.9	ND	5.1
MSB2B	XRF-MSB2B/Sidewall-D	XRF	35.1	ND	4.9	ND	5.7
MSB2B	XRF-MSB2B/Sidewall-E	XRF	31.9	ND	4.8	ND	5.0
MSB2B	XRF-MSB2B/Sidewall-F2	XRF	11.7	7.0	4.5	ND	5.1
MSB2B	XRF-MSB2B/Sidewall-G	XRF	16.3	ND	4.4	ND	5.4
MSB2B	XRF-MSB2B/Sidewall-H	XRF	13.0	ND	4.5	ND	5.9

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

*-Sidewall samples became part of excavation area WP1DX as samples XRF-WP1DX/Sidewall-H, XRF-WP1DX/Sidewall-I, XRF-WP1DX/Sidewall-J, XRF-WP1DX-Sidewall K.
**-Sidewall sample locations to the north and east were removed during over-excavation of area WP2B along the former railroad tracks.

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BEECH GROVE, INDIANA

POST-EXCAVATION CONDITIONS
MSB2A & MSB2B

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Revision Number	0

FIGURE 6

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\HWMU\ACAD-MSB2A MSB2B EXCAVATION VOLUME-Model.dwg, 6/7/2016 10:58:42 AM, DWG To PDF-FLAT.pc3

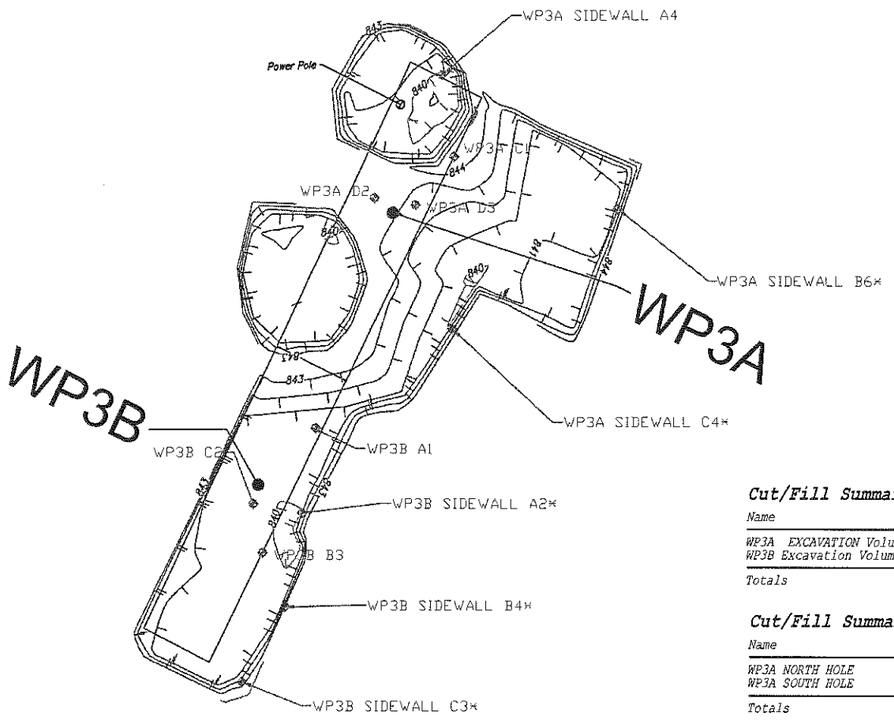
NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)

1 inch = 30 ft.



Cut/Fill Summary

Name	*2d Area*	*Cut*	*Fill*	*Net*
WP3A EXCAVATION Volume	*334.57sq.yd*	*282 Cu. Yd.*	*0 Cu. Yd.*	*282 Cu. Yd.<Cut>*
WP3B Excavation Volume	*198.11sq.yd*	*230 Cu. Yd.*	*0 Cu. Yd.*	*230 Cu. Yd.<Cut>*
Totals	*532.68sq.yd*	*512 Cu. Yd.*	*0 Cu. Yd.*	*512 Cu. Yd.<Cut>*

Cut/Fill Summary

Name	*2d Area*	*Cut*	*Fill*	*Net*
WP3A NORTH HOLE	*74.90sq.yd*	*84 Cu. Yd.*	*0 Cu. Yd.*	*84 Cu. Yd.<Cut>*
WP3A SOUTH HOLE	*79.55sq.yd*	*88 Cu. Yd.*	*0 Cu. Yd.*	*88 Cu. Yd.<Cut>*
Totals	*154.45sq.yd*	*172 Cu. Yd.*	*0 Cu. Yd.*	*172 Cu. Yd.<Cut>*

HWMU Area WP3A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	**970**	**37**	**20**	**77**	**53**
WP3A	XRF-WP3A/3.0-3.5/C1	XRF	26.0	4.6	12.2	4.2	ND
WP3A	WP3A/3.5-4.0/C1	Lab	471.0	2.8	8.7	1.5	U (1)
WP3A	XRF-WP3A/4.0-4.5/D2	XRF	18.3	ND	5.4	ND	7.1
WP3A	XRF-WP3A/4.5-5.0/D2	XRF	16.7	ND	4.8	ND	6.0
WP3A	XRF-WP3A/4.0-4.5/D3	XRF	20.1	ND	5.3	ND	5.4
WP3A	XRF-WP3A/4.5-5.0/D3	XRF	16.7	ND	5.2	ND	5.1
WP3A	WP3A/Sidewall-A4	Lab	26.2	U (1)	7.2	U (0.5)	U (1)
WP3A	XRF-WP3A/Sidewall-B6	XRF	61.4	ND	6.1	ND	5.9
WP3A	XRF-WP3A/Sidewall-C4	XRF	258.7	ND	11.4	ND	6.7

HWMU Area WP3B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	**970**	**37**	**20**	**77**	**53**
WP3B	XRF-WP3B/3.3-3.8-A1	XRF	31.9	3.3	ND	0.8	1.3
WP3B	XRF-WP3B/3.8-4.3-A1	XRF	23.7	5.1	1.4	5.0	ND
WP3B	XRF-WP3B-5.3-5.8-C2	XRF	14.4	ND	4.0	ND	5.7
WP3B	XRF-WP3B-5.8-6.3-C2	XRF	26.9	ND	4.4	ND	5.7
WP3B	XRF-WP3B/4.3-4.8/B3	XRF	45.7	ND	3.3	ND	5.1
WP3B	XRF-WP3B/4.8-5.3/B3	XRF	77.1	ND	3.7	ND	4.0
WP3B	WP3B/Sidewall-A2	Lab	222.0	2.2	11.2	15.0	U (0.96)
WP3B	WP3B/sidewall-B4	Lab	392.0	1.9	9.2	4.7	U (0.96)
WP3B	XRF-WP3B-Sidewall-C3	XRF	479.5	ND	9.2	ND	5.7

Four sidewall locations initially laid out in WP3B (A - D). Final excavation depth and extent in WP3B and surrounding areas (WP3A and FL-2) resulted in no sidewall remaining at location D within pre-defined limits of the HWMU.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, WP3A & WP3B EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.
3. * DENOTES A FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

◆ SIDEWALL A POST–EXCAVATION SAMPLE LOCATION

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3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP3A & WP3B

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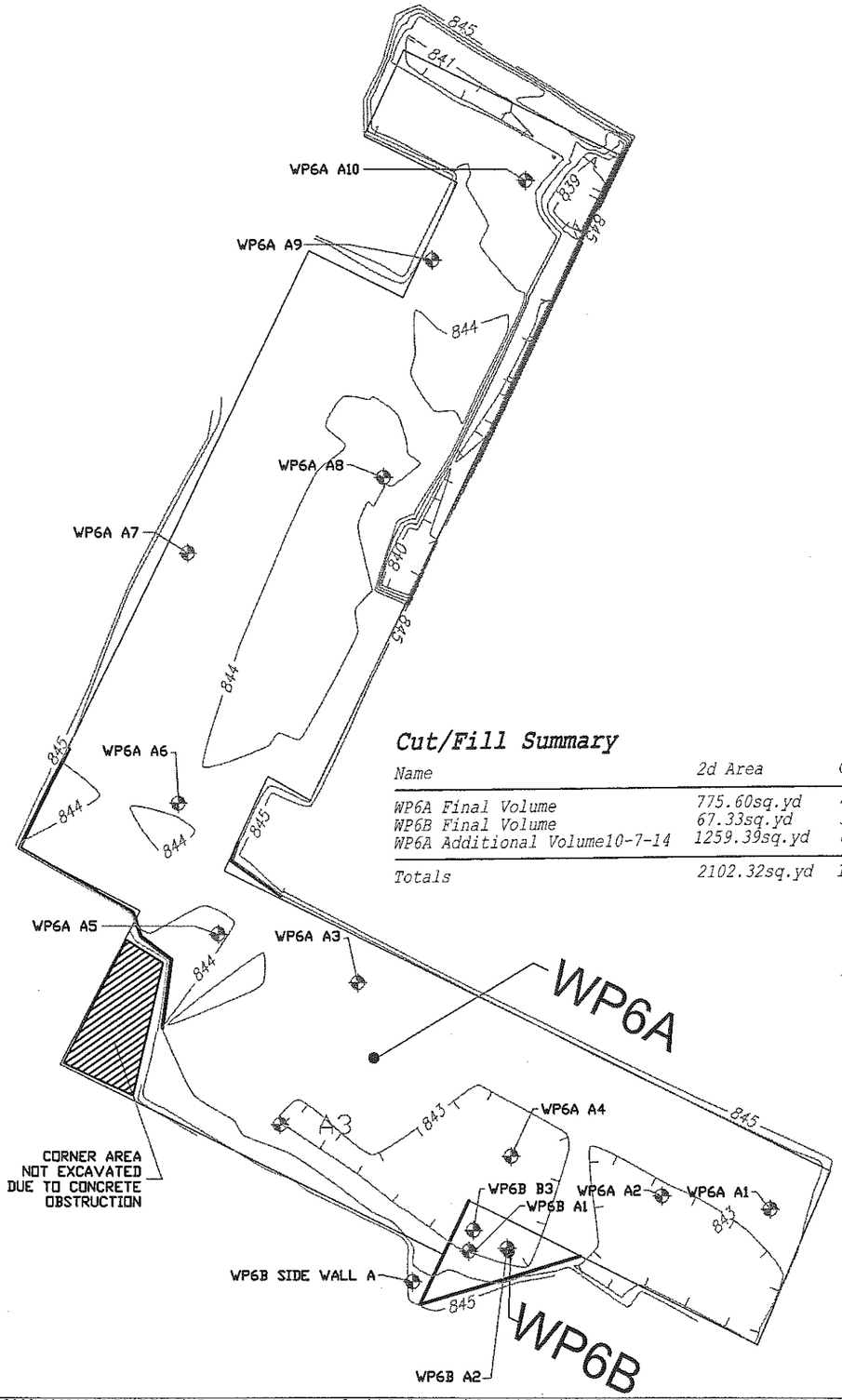
Revision Number	0

FIGURE 7



NORTH

GRAPHIC SCALE

30 0 15 30 30

(IN FEET)

1 inch = 30 ft.

Cut/Fill Summary

Name	*2d Area*	*Cut*	*Fill*	*Net*
WP6A Final Volume	*775.60sq.yd*	*413 Cu. Yd.*	*0 Cu. Yd.*	*413 Cu. Yd.<Cut>*
WP6B Final Volume	*67.33sq.yd*	*37 Cu. Yd.*	*0 Cu. Yd.*	*37 Cu. Yd.<Cut>*
WP6A Additional Volume10-7-14	*1259.39sq.yd*	*886 Cu. Yd.*	*0 Cu. Yd.*	*886 Cu. Yd.<Cut>*
Totals	*2102.32sq.yd*	*1336 Cu. Yd.*	*0 Cu. Yd.*	*1336 Cu. Yd.<Cut>*

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, WP6A & WP6B EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.
3. * DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

◆ SIDEWALL A POST–EXCAVATION SAMPLE LOCATION

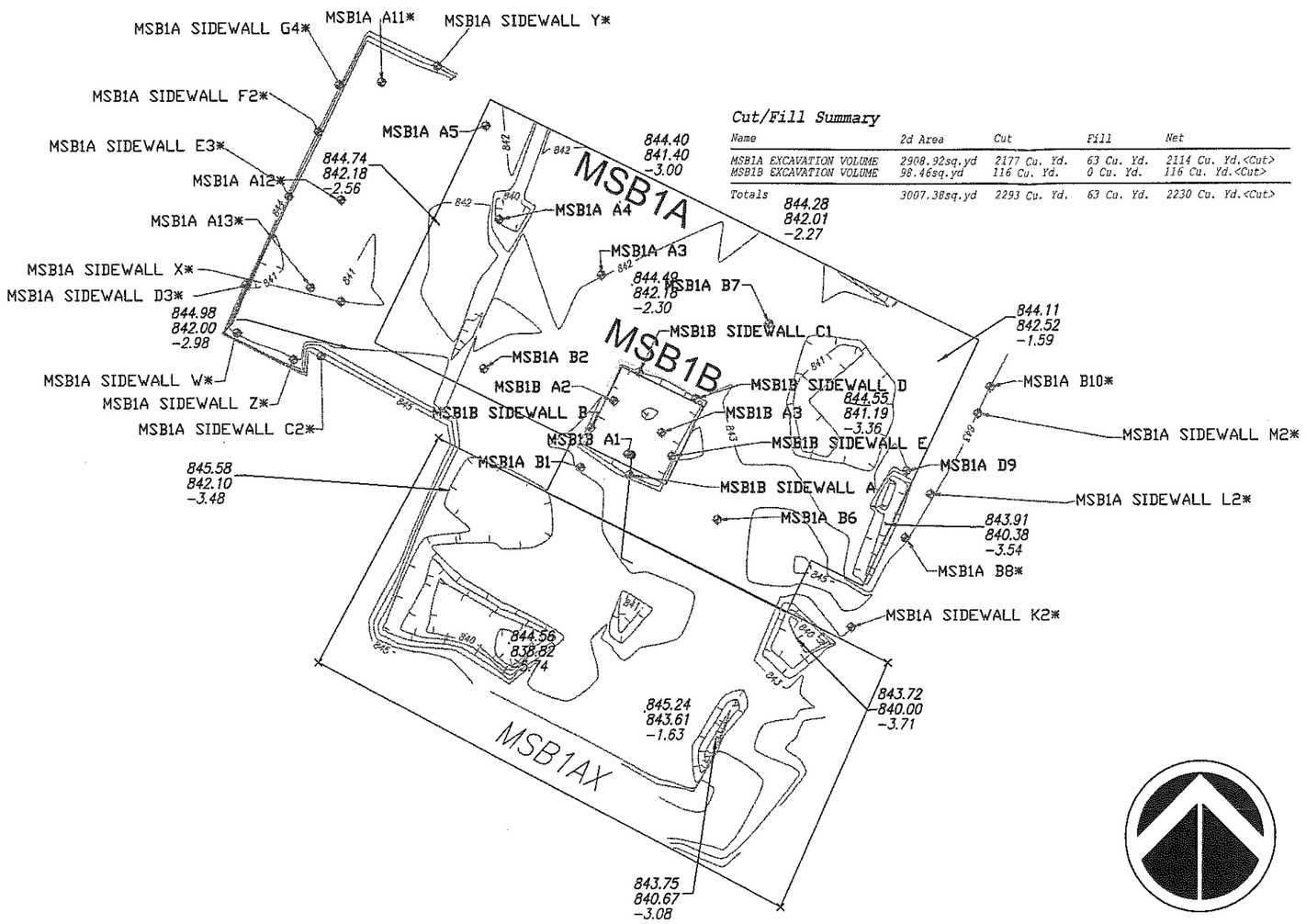
REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP6A & WP6B

ADVANCED GeoServices
Engineering for the Environment. Planning for People.™
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale:	1" = 30'
Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	8/21/2015
Sheet No.:	8 OF 11
Revision Number:	0

FIGURE 8



Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
MSB1A EXCAVATION VOLUME	2908.92sq.yd	2177 Cu. Yd.	63 Cu. Yd.	2114 Cu. Yd.<Cut>
MSB1B EXCAVATION VOLUME	98.46sq.yd	116 Cu. Yd.	0 Cu. Yd.	116 Cu. Yd.<Cut>
Totals	3007.38sq.yd	2293 Cu. Yd.	63 Cu. Yd.	2230 Cu. Yd.<Cut>

NORTH

GRAPHIC SCALE

80 0 20 40 80

(IN FEET)

1 inch = 40 ft.

NOTES:

1. POST-EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST-EXCAVATION SURVEY, MSB1A & MSB1B EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 1-FT INTERVALS
3. * DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE-DEFINED LIMITS

EXCAVATION AREA PRE-DEFINED LIMITS

SIDEWALL A POST-EXCAVATION SAMPLE LOCATION

HWMU Area MSB1A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
	Target Closure Concentrations		970	37	20	77	53
MSB1A	XRF-MSB1A/2.0-2.5/B1	XRF	9.4	ND	4.5	ND	ND
MSB1A	MSB1A/2.5-3.0/B1	Lab	85.2	1.8	13.0	0.86	U (0.96)
MSB1A	XRF-MSB1A/2.0-2.5/B2	XRF	16.6	ND	4.9	ND	5.7
MSB1A	XRF-MSB1A/2.5-3.0/B2	XRF	50.7	ND	5.4	ND	5.6
MSB1A	XRF-MSB1A/1.0-1.5/A3	XRF	10.7	3.3	2.8	0.2	ND
MSB1A	XRF-MSB1A/1.5-2.0/A3	XRF	72.3	ND	4.5	ND	ND
MSB1A	XRF-MSB1A/1.0-1.5/A4	XRF	81.0	3.3	4.6	1.4	ND
MSB1A	XRF-MSB1A/1.5-2.0/A4	XRF	21.9	8.0	6.4	2.5	0.7
MSB1A	XRF-MSB1A/1.0-1.5/A5	XRF	58.9	ND	4.4	ND	ND
MSB1A	XRF-MSB1A/1.5-2.0/A5	XRF	54.0	ND	0.8	ND	ND
MSB1A	XRF-MSB1A/2.0-2.5/B6	XRF	55.0	ND	5.7	ND	ND
MSB1A	XRF-MSB1A/2.5-3.0/B6	XRF	40.3	ND	5.2	ND	ND
MSB1A	XRF-MSB1A/2.0-2.5/B7	XRF	8.3	ND	4.4	4.7	ND
MSB1A	XRF-MSB1A/2.5-3.0/B7	XRF	7.7	ND	4.4	ND	ND
MSB1A	MSB1A/3.0-3.5/B8	Lab	19.6	U (1)	8.6	4.1	U (1)
MSB1A	MSB1A/3.5-4.0/B8	Lab	268.0	1.6	10.8	17.1	U (0.98)
MSB1A	XRF-MSB1A/5.0-5.5/D9	XRF	11.9	ND	4.6	ND	5.3
MSB1A	XRF-MSB1A/5.5-6.0/D9	XRF	11.4	ND	4.5	ND	5.3
MSB1A	MSB1A/3.0-3.5-B10	Lab	7.6	U (0.96)	7.1	0.54	U (0.96)
MSB1A	MSB1A/3.5-4.0/B10	Lab	5.3	U (1.1)	7.2	U (0.54)	U (1.1)
MSB1A	MSB1A/3.0-3.5/A11	Lab	82.9	U (0.99)	8.6	U (0.49)	U (0.99)
MSB1A	MSB1A/3.5-4.0/A11	Lab	7.9	U (1.1)	7.4	U (0.53)	U (1.1)
MSB1A	MSB1A/3.0-3.5/A12	Lab	5.2	U (1.1)	6.7	U (0.56)	U (1.1)
MSB1A	MSB1A/3.5-4.0/A12	Lab	5.6	U (1)	6.8	U (0.52)	U (1)
MSB1A	MSB1A/3.0-3.5/A13	Lab	8.4	U (1)	8.6	0.78	U (5.1)
MSB1A	MSB1A/3.5-4.0/A13	Lab	13.3	U (0.97)	7.4	1.9	U (0.97)
MSB1A	XRF-MSB1A/Sidewall-C2	XRF	15.9	ND	8.7	ND	5.7
MSB1A	MSB1A/Sidewall-D3	Lab	5.6	U (1.1)	7.0	U (0.53)	U (1.1)
MSB1A	MSB1A/Sidewall-E3	Lab	6.2	U (1.1)	9.8	U (0.56)	U (1.1)
MSB1A	MSB1A/Sidewall-F2	Lab	6.3	U (1.1)	7.0	U (0.53)	U (1.1)
MSB1A	MSB1A/Sidewall-G4	Lab	8.1	U (1.1)	8.1	U (.50)	U (1.1)
MSB1A	XRF-MSB1A/Sidewall J	XRF	26.4	ND	2.8	ND	ND
MSB1A	MSB1A/Sidewall-K2	Lab	301.0	4.7	16.2	1.5	U (0.95)
MSB1A	MSB1A/Sidewall-L2	Lab	170.0	1.9	16.9	5.8	U (0.91)
MSB1A	MSB1A/Sidewall M	Lab	43.1	U (1.1)	14.7	15.7	U (1.1)
MSB1A	XRF-MSB1A/Sidewall-M2	XRF	60.9	ND	5.6	ND	5.9
MSB1A	MSB1A/Sidewall-W	Lab	7.0	U (1.1)	7.5	U (0.53)	U (2.1)
MSB1A	MSB1A/Sidewall-X	Lab	8.2	U (1.1)	6.9	U (0.55)	U (2.2)
MSB1A	MSB1A/Sidewall-Y	Lab	8.7	U (1.1)	7.3	U (0.55)	U (1.1)
MSB1A	MSB1A/Sidewall-Z	Lab	9.7	U (0.98)	8.3	U (0.49)	U (0.98)

Thirteen sidewall locations initially laid out in MSB1A (A - M). Final excavation depth and extent in MSB1A and surrounding areas (MSB1AX and MSB2A) resulted in no sidewall remaining at locations A, B, H, I, and J on the north and south sides within pre-defined limits of the HWMU.

HWMU Area MSB1B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
	Target Closure Concentrations		970	37	20	77	53
MSB1B	XRF-MSB1B/2.5-3.0/A1	XRF	45.6	ND	6.1	ND	ND
MSB1B	XRF-MSB1B/3.0-3.5/A1	XRF	297.7	ND	7.1	ND	ND
MSB1B	MSB1B/2.5-3.0/A2	Lab	719.0	2.2	12.4	10.8	U (1.1)
MSB1B	XRF-MSB1B/3.0-3.5/A2	XRF	45.0	ND	4.9	ND	0.4
MSB1B	XRF-MSB1B/2.5-3.0/A3	XRF	286.7	ND	2.9	ND	0.3
MSB1B	XRF-MSB1B/3.0-3.5/A3	XRF	84.3	ND	4.2	ND	ND
MSB1B	MSB1B/Sidewall A	Lab	64.1	1.6	4.5	U (0.48)	1.5
MSB1B	XRF-MSB1B/Sidewall B	XRF	11.1	ND	4.6	2.4	ND
MSB1B	XRF-MSB1B/Sidewall-C1	XRF	11.9	ND	5.5	ND	4.9
MSB1B	XRF-MSB1B/Sidewall D	XRF	169.0	2.2	4.2	ND	0.6
MSB1B	XRF-MSB1B/Sidewall E	XRF	9.1	ND	4.4	ND	0.4

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo datad November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST-EXCAVATION CONDITIONS
MSB1A & MSB1B

ADVANCED GeoServices IM
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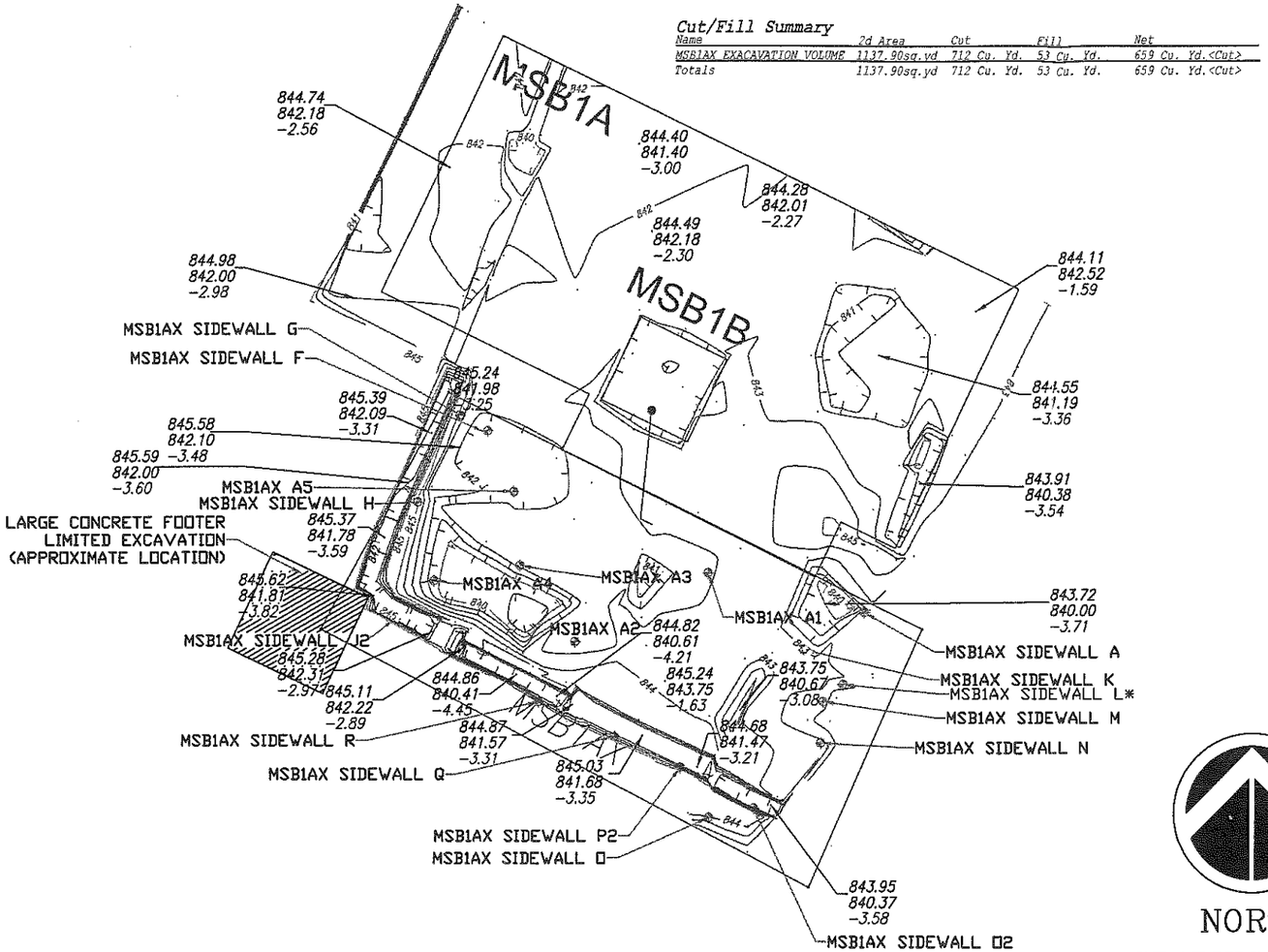
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale:	1" = 40'
Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003-1046
Drawing Date:	8/21/2015
Sheet No.:	9 OF 11
Revision Number:	0

FIGURE 9



HWMU Area MSB1AX Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
MSB1AX	XRF-MSB1AX/1.0-1.5/A1	XRF	3.8	ND	5.8	ND	6.4
MSB1AX	XRF-MSB1AX/1.5-2.0/A1	XRF	3.5	ND	6.8	ND	5.4
MSB1AX	XRF-MSB1AX/1.0-1.5/A2	XRF	53.3	ND	4.1	1.2	5.7
MSB1AX	MSB1AX/1.5-2.0/A2	Lab	90.9	1.5	11.5	0.87	U (1.1)
MSB1AX	XRF-MSB1AX/1.0-1.5/A3	XRF	168.2	ND	9.6	ND	5.7
MSB1AX	XRF-MSB1AX/1.5-2.0/A3	XRF	24.3	ND	5.9	ND	4.3
MSB1AX	XRF-MSB1AX/4.0-4.5/A4	XRF	17.0	ND	5.2	ND	3.6
MSB1AX	XRF-MSB1AX/4.5-5.0/A4	XRF	195.5	ND	9.2	ND	5.9
MSB1AX	XRF-MSB1AX/3.0-3.5/A5	XRF	19.1	ND	5.1	ND	4.9
MSB1AX	XRF-MSB1AX/3.5-4.0/A5	XRF	18.7	ND	4.6	ND	5.4
MSB1AX	XRF-MSB1AX/Sidewall-A	XRF	22.0	ND	4.0	ND	6.3
MSB1AX	XRF-MSB1AX/Sidewall-B	XRF	38.8	ND	4.9	ND	6.4
MSB1AX	XRF-MSB1AX/Sidewall-C	XRF	41.0	ND	4.7	ND	5.1
MSB1AX	XRF-MSB1AX/Sidewall-D	XRF	99.6	ND	7.8	ND	5.7
MSB1AX	XRF-MSB1AX/Sidewall-E	XRF	58.5	ND	4.1	4.4	6.6
MSB1AX	XRF-MSB1AX/Sidewall-F	XRF	18.4	ND	3.2	ND	5.9
MSB1AX	XRF-MSB1AX/Sidewall-G	XRF	54.5	ND	6.6	ND	5.4
MSB1AX	MSB1AX/Sidewall-H	Lab	607.0	3.1	8.8	42.3	U (1.1)
MSB1AX	MSB1AX/Sidewall-J2	Lab	15.2	U (1.2)	9.7	U (0.6)	U (6)
MSB1AX	MSB1AX/Sidewall-K	Lab	409.0	5.0	9.3	2.0	U (1)
MSB1AX	XRF-MSB1AX/Sidewall-L	XRF	77.4	ND	8.8	ND	4.3
MSB1AX	MSB1AX/Sidewall-M	Lab	127.0	1.4	9.2	1.9	U (1)
MSB1AX	XRF-MSB1AX/Sidewall-N	XRF	735.6	ND	13.7	ND	6.6
MSB1AX	XRF-MSB1AX/Sidewall-O	XRF	16.4	ND	4.3	ND	5.9
MSB1AX	MSB1AX/Sidewall-O2	Lab	6.3	U (1)	7.7	U (0.5)	U (1)
MSB1AX	MSB1AX/Sidewall-P2	Lab	12.5	U (1.1)	7.6	U (0.54)	U (1.1)
MSB1AX	MSB1AX/Sidewall-Q	Lab	7.3	U (1)	7.7	U (0.51)	U (1)
MSB1AX	MSB1AX/Sidewall-R	Lab	11.0	U (1.1)	10.2	U (0.53)	U (10.5)

Sidewall locations B, C, D, E and F (shared with MSB1A) eventually removed during adjacent MSB1A excavation.
Final sidewall I location not sampled due to large concrete obstruction.

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo datad November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

NOTES:
1. POST-EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST-EXCAVATION SURVEY, MSB1A, MSB1B, & MSB1AX EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 1-FT INTERVALS.
3. * DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE-DEFINED LIMITS

EXCAVATION AREA PRE-DEFINED LIMITS

SIDEWALL A POST-EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST-EXCAVATION CONDITIONS
MSB1AX

ADVANCED GeoServices
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Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003-1046
Drawing Date:	8/21/2015
Sheet No.:	10 OF 11
Revision Number:	0

FIGURE 10

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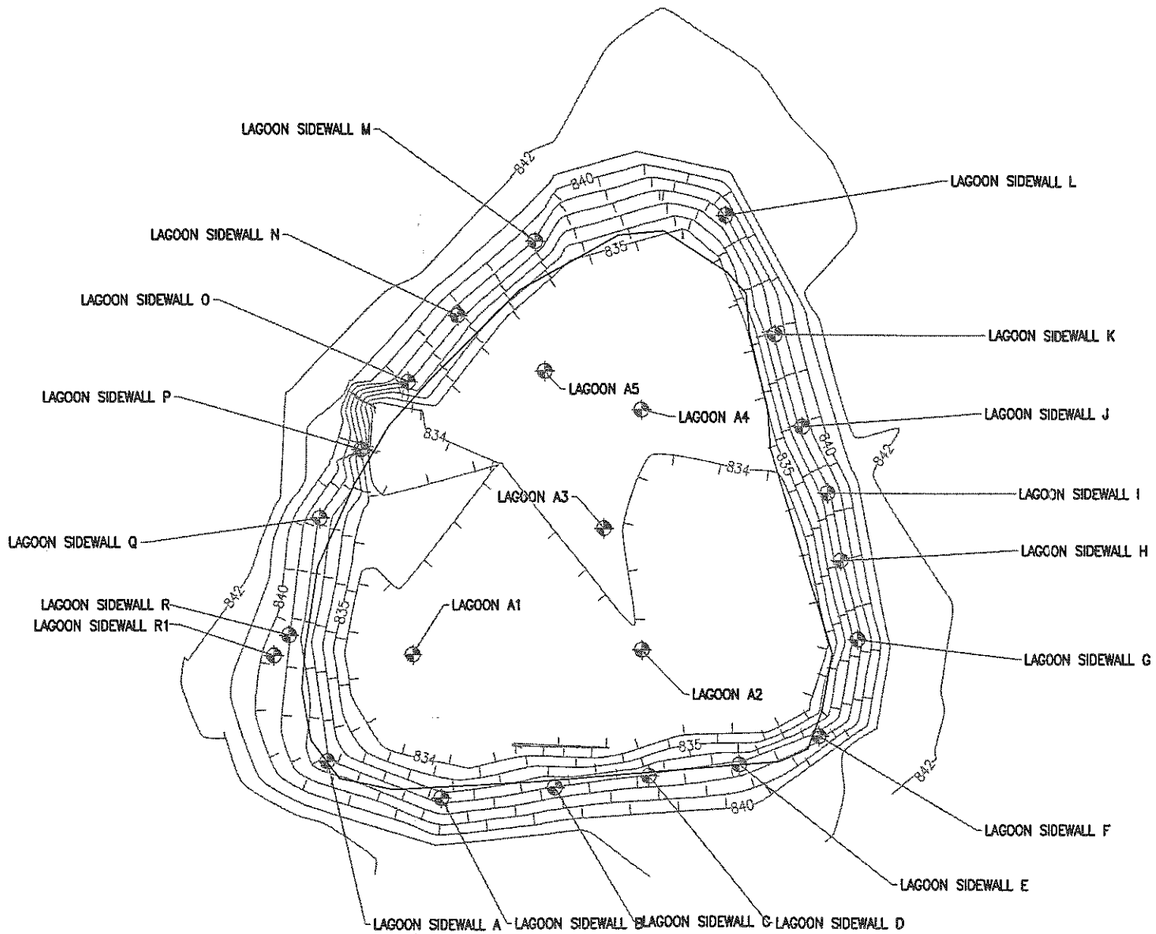

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)

1 inch = 30 ft.

HWMU Area Lagoon Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
Lagoon	XRF-Lagoon/1.0-1.5/A1	XRF	8.3	ND	4.4	ND	ND
Lagoon	XRF-Lagoon/1.5-2.0/A1	XRF	8.7	7.3	4.6	ND	ND
Lagoon	XRF-Lagoon/1.0-1.5/A2	XRF	9.1	8.0	4.5	ND	ND
Lagoon	Lagoon/1.5-2.0/A2	Lab	11.9	U (1)	8.0	0.55	U (1)
Lagoon	Lagoon/1.0-1.5/A3	Lab	7.0	U (1)	7.9	U (0.51)	U (1)
Lagoon	Lagoon/1.5-2.0/A3	Lab	6.5	U (1)	7.0	U (0.5)	U (1)
Lagoon	Lagoon/1.0-1.5/A4	Lab	5.7	U (0.99)	6.5	U (0.5)	U (0.99)
Lagoon	Lagoon/1.5-2.0/A4	Lab	6.7	U (1)	6.6	U (0.5)	U (1)
Lagoon	Lagoon/1.0-1.5/A5	Lab	18.0	U (0.97)	7.7	U (0.48)	U (0.97)
Lagoon	Lagoon/1.5-2.0/A5	Lab	6.3	U (1)	7.4	U (0.51)	U (1)
Lagoon	Lagoon/Sidewall-A	Lab	737.0	11.4	17.7	2.1	U (1.2)
Lagoon	XRF-Lagoon/Sidewall-B	XRF	15.4	ND	5.4	ND	ND
Lagoon	Lagoon/Sidewall-C	Lab	17.2	U (1.2)	10.8	U (0.6)	U (1.2)
Lagoon	XRF-Lagoon/Sidewall-D	XRF	2.0	ND	6.3	ND	ND
Lagoon	XRF-Lagoon/Sidewall-H	XRF	22.1	ND	6.6	ND	ND
Lagoon	XRF-Lagoon/Sidewall-F	XRF	10.0	ND	4.7	ND	ND
Lagoon	Lagoon/Sidewall-G	Lab	407.0	1.7	7.6	0.64	U (1.2)
Lagoon	XRF-Lagoon/Sidewall-H	XRF	17.1	ND	5.2	ND	ND
Lagoon	XRF-Lagoon/Sidewall-I	XRF	14.1	ND	5.4	ND	ND
Lagoon	XRF-Lagoon/Sidewall-J	XRF	19.4	ND	6.9	ND	ND
Lagoon	Lagoon/Sidewall-K	Lab	12.3	U (1)	11.5	U (0.51)	U (1)
Lagoon	XRF-Lagoon/Sidewall-L	XRF	12.9	ND	4.9	ND	ND
Lagoon	XRF-Lagoon/Sidewall-M	XRF	45.0	ND	4.9	ND	ND
Lagoon	XRF-Lagoon/Sidewall-N	XRF	16.4	ND	4.7	ND	ND
Lagoon	XRF-Lagoon/Sidewall-O	XRF	6.9	ND	3.9	ND	ND
Lagoon	XRF-Lagoon/Sidewall-P	XRF	41.0	6.3	5.5	ND	ND
Lagoon	XRF-Lagoon/Sidewall-Q	XRF	21.4	0.6	4.1	ND	ND
Lagoon	Lagoon/Sidewall-R1	Lab	9.2	U (1.2)	9.4	U (0.58)	U (1.2)

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo datad November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

Cut/Fill Summary

Name	*2d Area*	*Cut*	*Fill*	*Net*
LAGOON FINAL VOLUME 10-27-14	*2441.82sq.yd*	*1243 Cu. Yd.*	*0 Cu. Yd.*	*1243 Cu. Yd.<Cut>*
Totals	*2441.82sq.yd*	*1243 Cu. Yd.*	*0 Cu. Yd.*	*1243 Cu. Yd.<Cut>*

NOTES:
1. POST-EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST-EXCAVATION SURVEY, LAGOON EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1-FT INTERVALS.

LEGEND:

HWMU PRE-DEFINED LIMITS

EXCAVATION AREA PRE-DEFINED LIMITS

◆ SIDEWALL A POST-EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST-EXCAVATION CONDITIONS
LAGOON

ADVANCED GeoServices
Engineering for the Environment. Planning for People.
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Border 1" = 30'
Drawn By JSD/SDW
Checked By PGS
Project Mgr.: JSD
Originated By PGS
Project No.: 2003-1046
Drawing Date: 8/21/2015
Sheet No.: 11 OF 11
Revision Number: 0

FIGURE 11

DRAWINGS

ATTACHMENT A

XRF CORRECTION FACTOR MEMO AND CORRESPONDENCE

ADVANCED GeoServices
Engineering for the Environment. Planning for People.™
1055 Andrew Drive, Suite A
West Chester, PA 19380-4293
tel 610.840.9100 fax 610.840.9199
www.advancedgeoservices.com

MEMORANDUM

Via Email

TO: Ruth Jean, IDEM
Tammy Ohl, USEPA

FROM: Jan Dobinsky, Advanced GeoServices Corp.

Cc: Matt Love, Refined Metals Corporation (RMC)
Paul Stratman, Advanced GeoServices Corp.
Scott Ward, Advanced GeoServices Corp.
Stacey Durley (TetraTech)

DATE: November 3, 2014

RE: RMC Beech Grove Indiana CMD
XRF Correction Factors Determination

Background

As mentioned during the recent construction progress meetings, Advanced GeoServices has been working to establish the correlation between the XRF results and the lab confirmation results. So far, 206 samples have been analyzed using the XRF and 39 of those have been sent to Pace Analytical (Indianapolis) for laboratory confirmation (18.9%). The methodology for performing XRF analysis and implementing correction factors is described in sections 2.1, 2.2, and 2.3 of the CMD CQAP (Appendix A).

Using Excel, the lab data (y-axis) was plotted against the XRF data (x-axis) for lead and each of the other HWMU constituents to determine the correction factor (regression equation) and coefficient of determination (r^2). Per the CMD, the desired minimum r^2 value is $\geq$ 0.70 ($r \geq$ 0.837). Initially, the attempt was made to use the complete data set of 39 samples with both XRF and lab data to determine the "raw" r^2 value for all five constituents. For lead and cadmium the r^2 was above the desired minimum value of 0.70.

However, for the other three HWMU constituents the "raw" r^2 value did not achieve the minimum desired in the CMD. In general, the XRF reads higher than lab data for the other HWMU constituents. In many cases, even when lead is detected in a sample the other HWMU constituents are not (most notably lacking is Selenium). These lacks of detection for other the other HWMU constituents combined with the presence of outliers in the data set are believed to be the primary source of the low r^2 calculated using the "raw" data set for selenium, antimony, and arsenic.

In order to establish a better correction factor and coefficient of determination, non-detects and certain outliers were removed from the "raw" data set as described below for each constituent of concern. The removal of results from the data set used for the regression analysis was minimized and applied uniformly to maintain adequate representation of sample data (i.e., no cherry picking).

The following information is provided and discussed further in the text below:

- "Raw" uncorrected XRF data collected through October 27, 2014;
- Laboratory data received through October 27, 2014;
- "Raw" and modified data correlations and correction factor determinations from Excel for all five HWMU constituents.

Lead

Lead is a constituent of concern in all onsite and offsite remediation areas. XRF analysis for lead has been performed on all 206 samples collected to date. Lab analysis for lead has been performed on all 39 confirmatory samples collected to date (18.9%). The linear regression of the entire data set of samples produces an $r^2 = 0.721$.

Modifying the data set using rationale similar to that proposed for some of the other HWMU constituents below did not improve the r^2 value. Therefore, the entire data set was used for lead. The correction factor determined using the entire data set is $XRF_{COR} = 1.3314XRF_{RAW} - 115.53$. In general, XRF results near a PRG will be corrected upwards to a higher corrected final result.

For example:

- a "raw" XRF result of 815 mg/kg will correct to a final result of 969 mg/kg (just below the HWMU PRG for lead of 970 mg/kg);
- a "raw" XRF result of 775 mg/kg will correct to 916.3 mg/kg (just below the onsite PRG for lead of 920 mg/kg); and
- a "raw" XRF result of 385 mg/kg will correct to 397.1 mg/kg (just below the offsite PRG of 400 mg/kg).

Antimony

Antimony is a constituent of concern in the HWMU areas. Analysis for antimony is not performed on samples collected outside of the HWMU areas. XRF analysis for antimony has been performed on 183 samples to date. Lab analysis for antimony has been performed on 34 of the confirmatory samples to date (18.6%). The linear regression of the "raw" data set of these samples produces an $r^2 = 0.2764$.

In order to minimize the effect of outliers and non-detects on the correction factor, samples with non-detects were removed from the data set. Samples with XRF results more than twice the PRG (i.e., greater than 74 mg/kg) were also removed from the data set. This reduces the data set to seventeen (17) samples.

Based on these modifications to the antimony data set, the r^2 improved to 0.4995; which is less than desired. The correction factor determined using the modified data set is $XRF_{COR} = 0.2864XRF_{RAW} - 2.3686$. XRF results less than twice the PRG (i.e., less than 74 mg/kg) will be corrected downwards to a lower corrected final result. For example, a "raw" XRF result of 74 mg/kg will correct to 18.8 mg/kg (well below the HWMU PRG for antimony of 37 mg/kg).

For uncorrected XRF results greater than 74 mg/kg (twice the PRG), no correction factor will be applied.

Arsenic

Arsenic is a constituent of concern in the HWMU areas. Analysis for arsenic is not performed on samples collected outside of the HWMU areas. XRF analysis for arsenic has been performed on 183 samples to date. Lab analysis for arsenic has been performed on 34 of the confirmatory samples to date (18.6%). The linear regression of the "raw" data set of these samples produces an $r^2 = 0.1799$.

In order to minimize the effect of outliers and non-detects on the correction factor, samples with non-detects were removed from the data set. Samples with XRF results more than twice the PRG (i.e., greater than 40 mg/kg) were also removed from the data set. This reduces the data set to twenty-five (25) samples. The regression trend line was also modified to have an intercept at zero, zero.

Based on these modifications to the arsenic data set, the r^2 can be improved to 0.658; which is still less than desired. The correction factor determined using the "corrected" data set is $XRF_{COR} = 0.412XRF_{RAW}$. XRF results less than twice the PRG (i.e., less than 40 mg/kg) will be corrected downwards to a lower corrected final result. For example, a "raw" XRF result of 40 mg/kg will correct to 16.48 mg/kg (below the HWMU PRG for arsenic of 20 mg/kg).

For uncorrected XRF results greater than 40 mg/kg (twice the PRG), no correction factor will be applied.

Cadmium

Cadmium is a constituent of concern in the HWMU areas. Analysis for cadmium is not performed on samples collected outside of the HWMU areas. XRF analysis for cadmium has been performed on 183 samples to date. Lab analysis for antimony has been performed on 34 of

the confirmatory samples to date (18.6%). The linear regression of the "raw" data set of these samples produces an $r^2 = 0.9914$.

The correction factor determined using the "corrected" data set is $XRF_{COR} = 0.7522XRF_{RAW} - 1.3091$. XRF results of less than twice the PRG (i.e., less than 154 mg/kg) will be corrected downwards to a lower corrected final result. For example, a "raw" XRF result of 104 mg/kg will correct to 76.7 mg/kg (just below the HWMU PRG for cadmium of 77 mg/kg).

For uncorrected XRF results greater than 154 mg/kg (twice the PRG), no correction factor will be applied.

Selenium

Selenium is a constituent of concern in the HWMU areas. Analysis for selenium is not performed on samples collected outside of the HWMU areas. XRF analysis for selenium has been performed on 183 samples to date. Lab analysis for selenium has been performed on 34 of the confirmatory samples to date (18.5%). The linear regression of the "raw" data set of these samples produces an $r^2 = 0.0145$. To date only five (5) XRF analysis runs have produced detections for selenium. Of those five results, only one (1) resulted in a laboratory detection. Two other samples had laboratory detections (1.1 – 1.2 mg/kg) when no detection was produced on the XRF analysis. There is not enough data approaching the PRG (53 mg/kg) to establish a meaningful correction factor for selenium. For the remainder of the project "raw" XRF data will be used instead of corrected XRF data. If any XRF results for selenium approach or exceed the PRG they will be sent out for lab analysis.

Project Application

We propose that for the remainder of this season's excavation, the correction factors described above be applied to all XRF data to achieve a final corrected data set that can be used guide excavation and determine when excavation is complete. Samples will continue to be sent to the lab for confirmation at the rate of approximately 1 in 5, as described in the CMD. However, the data from these samples will not be used to modify the correction factors used for excavation over the remainder of this season's excavation work (2014). Once the correction factors described above are applied they will be accepted as final and not be subject to revision based on future modifications to the correction factors. A final corrected XRF result that produces a negative value will have the result rounded to zero. In cases where lab data conflicts with corrected XRF data, the lab data will take precedence.

If there is winter demobilization, the data collected over the remainder of this season can be used to refine the correction factors that will be applied to future excavation work performed in the spring of 2015.

Jan Dobinsky

From: Ohl, Tamara <ohl.tamara@epa.gov>
Sent: Monday, November 10, 2014 3:04 PM
To: Jan Dobinsky
Subject: RE: Beech Grove CMI XRF Correction Memo

Correct.

From: Jan Dobinsky [mailto:jdobinsky@advancedgeoservices.com]
Sent: Friday, November 07, 2014 3:48 PM
To: Ohl, Tamara; rjean@idem.in.gov
Cc: Paul Stratman; LOVE, Matt (Reading Equipment Center) (Matt.Love@exide.com); Durley, Stacey (stacey.durley@tetratech.com)
Subject: RE: Beech Grove CMI XRF Correction Memo

Thank you for reviewing that Tammy.

Just to confirm - the correction factor for lead may be applied to XRF results of less than 1,300 mg/kg. Correct?

Ruth - are you OK with the application of the proposed correction factors for the other HWMU metals?

I will relay the recommendations regarding sample preparation. However, Scott has described to me that some of the materials have been difficult to homogenize.

Regards,

Jan

From: Ohl, Tamara [ohl.tamara@epa.gov]
Sent: Friday, November 07, 2014 4:02 PM
To: Jan Dobinsky; rjean@idem.in.gov
Cc: Paul Stratman; LOVE, Matt (Reading Equipment Center) (Matt.Love@exide.com); Durley, Stacey (stacey.durley@tetratech.com)
Subject: RE: Beech Grove CMI XRF Correction Memo

Hi Jan:

Thank you for providing the analysis. EPA and IDEM have reviewed the memo and our consolidated comments are as follows:

The r^2 value is not ideal at .7, and should be around .9, or more. For the sampling conducted thus far, we will accept results under 1300, as they appear to be biased high. Over 1300, the XRF is biased low. Going forward, please review field procedures with Sections 11.4 -11.6 of Method 6200, as proper sample handling (e.g.: homogenization, drying, etc.) should provide results similar to the lab analysis.

We hope this helps, have a good weekend.

Tammy

From: Jan Dobinsky [mailto:jdobinsky@advancedgeoservices.com]
Sent: Monday, November 03, 2014 3:09 PM
To: rjean@idem.in.gov; Ohl, Tamara
Cc: Paul Stratman; LOVE, Matt (Reading Equipment Center) (Matt.Love@exide.com); Durley, Stacey (stacey.durley@tetratech.com)
Subject: Beech Grove CMI XRF Correction Memo

Ruth and Tammy,

Please see the attached memo outlining the proposed correction factors to be applied to XRF data. Please review at your earliest convenience and let me know if you are in agreement; or if you have any questions, suggestions, or objections. Unfortunately, I am out of the office tomorrow. However, if you are able to provide any comment before Wednesday's call I can include it on the agenda for discussion. Op-Tech has their travel weekend at the end of this week so they will only be working through Wednesday. If possible, I'd like to be in a position to address any comments and have us reach an agreement by the end of the day Friday so that we have the correction factors in place when Op-Tech resumes work on Monday.

Regards,

Jan
Jan S. Dobinsky
Project Professional

1055 Andrew Drive, Suite A
West Chester, PA 19380-4293
Direct: (610)840-9136
Mobile: (610) 334-0511
Fax: (610) 840-9199
Email: jdobinsky@advancedgeoservices.com
Web Site http://www.advancedgeoservices.com

Jan Dobinsky

From: JEAN, RUTH <RJEAN@idem.IN.gov>
Sent: Wednesday, November 12, 2014 8:09 AM
To: Jan Dobinsky
Subject: RE: Beech Grove CMI XRF Correction Memo

Hi Jan,

Sorry I didn't get back with you earlier. I've been out of the office. The other proposed correction factors are fine.

Thanks,

Ruth

From: Jan Dobinsky [mailto:jdobinsky@advancedgeoservices.com]
Sent: Friday, November 07, 2014 4:48 PM
To: Ohl, Tamara; JEAN, RUTH
Cc: Paul Stratman; LOVE, Matt (Reading Equipment Center) (Matt.Love@exide.com); Durley, Stacey (stacey.durley@tetratech.com)
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Jan

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We hope this helps, have a good weekend.

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Sent: Monday, November 03, 2014 3:09 PM
To: rjean@idem.in.gov; Ohl, Tamara
Cc: Paul Stratman; LOVE, Matt (Reading Equipment Center) (Matt.Love@exide.com); Durley, Stacey (stacey.durley@tetratech.com)
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Regards,

Jan
Jan S. Dobinsky
Project Professional

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Mobile: (610) 334-0511
Fax: (610) 840-9199
Email: jdobinsky@advancedgeoservices.com
Web Site http://www.advancedgeoservices.com

ATTACHMENT B

PACE ANALYTICAL LAB REPORTS (PROVIDED ELECTRONICALLY)